# THE WALL STREET JOURNAL.

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**EUROPE EDITION** 

**DJIA** 20902.98 ▲ 0.21%

**NASDAQ** 5861.73 ▲ 0.39%

**NIKKEI** 19604.61 ▲ 1.48%

**STOXX 600** 373.23 ▲ 0.09%

**BRENT** 51.37 ▼ 1.57%

**GOLD** 1200.70 ▼ 0.14%

**EURO** 1.0668 **A** 0.86%

#### Business & Finance

- SBC is set to name AIA's CEO as its next chairman, the first time the bank has hired outside for that role in its 151-year history. A1
- **♦** Credit-reporting firms agreed to remove tax-lien and civil-judgment data from U.S. consumers' reports starting around July 1. B1
- ♦ **Uber is squaring up** for a long fight in Seattle to block the U.S.'s first real unionization effort for app-based drivers. B1
- ◆ The SEC denied application for a bitcoin ETF, in a setback for the virtual currency and the Winklevoss brothers behind the plan. B5
- ◆ VW pleaded guilty to criminal charges over diesel-emissions cheating, capping a U.S. settlement. B2
- ◆ Tesla's Musk offered his firm's energy-storage technology to Australia, which has been hit by blackouts. B4
- ♦ Italy's Monte dei Paschi approved a plan to sell the bank's entire portfolio of bad loans at a deep discount. B5
- ◆ Alitalia's board is set to approve a plan that includes cost cuts and a management shake-up at the airline. B1
- ◆ Tax preparers have issued loans against expected refunds to over 1.5 million customers. B1
- ♦ Warner Bros.' "Kong" led the box office in its weekend debut, taking in \$61 million in North America. B4

#### World-Wide

- **◆** Investigators probing the leak of CIA information about purported hacking techniques are focusing on a handful of contractors. A7
- ♦ Preet Bharara said he was fired as Manhattan U.S. attorney after he defied a Justice Department request to resign. A7
- ◆ A diplomatic feud between Turkey and the Netherlands escalated ahead of critical elections in both countries. A3
- ◆ South Korea's Park vacated the presidential palace more than two days after she was ousted in a
- corruption scandal. A4 ◆ A double suicide bomb attack targeting Shiite pilgrims in Damascus killed at least 40 Iraqis traveling
- to a shrine to pray. A3 ◆ GOP lawmakers are showing increasing resistance to Trump's trade agenda, worried his plans could hurt
- ◆ Japanese authorities are still struggling to determine what caused the disaster six years ago at the Fukushima nuclear plant. A4

their states' exports. A5

- ◆ The U.K. Brexit minister urged lawmakers not to restrain May's freedom to negotiate a deal with the EU. A3
- An intruder was arrested after scaling a fence protecting the White House. A7

#### **Journal Report**

It isn't easy to become a data scientist. Having skill with numbers helps, but it is also critical to see which data is useful, and what findings it can yield. Workplace Technology, B3

CONTENTS Business & Fin..... B2 Crossword..... A12 Heard on Street..... B8

Life & Arts.... A8-9,12 Markets..... ..... A10-11 Opinion.... U.S. News..... A5.7 Journal Report..... B3 . B1 World News...... A2-4

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### **Turkey Spars With the Netherlands Over Rallies**



WAR OF WORDS: Backers of President Recep Tayyip Erdogan protested in Istanbul after the Netherlands expelled one minister and blocked the arrival of another. The two had planned rallies in the Netherlands in favor of Turkish constitutional changes. A3

## Coca Boom Alarms U.S.

Leaf makes comeback after the U.S. in 2013 stopped spraying crop used to make cocaine

By Juan Forero

EL TARRA, Colombia—The coca leaf used to make cocaine has made such a dramatic comeback in this country that plantings now cover more territory than they did before a multibillion-dollar U.S.-sponsored eradication campaign began 16 years ago, U.S. and Colombian officials said.

The surge in the coca crop has come since 2013, as the U.S. was forced to reduce and ultimately end spraying from dusters because of health concerns over the use of a toxic defoliant and the Colombian government's worries that the program was turning many rural residents against the state as it was negotiating a peace deal with Marxist rebels. On Tuesday, U.S. officials in Washington are expected to announce that coca is planted on about 695 square miles (180,000 hect-

ares) of land, or more than 10 reau of International Narcotics times the area of the District of Columbia. The increase continues a rise in which planted acreage has more than doubled since its lowest point in 2012.

The new figures, based on U.S. satellite imagery, show that farmers in towns such as El Tarra have been cultivating more coca, antinarcotics officials in both countries told The Wall Street Journal in recent interviews.

"They have been planting like crazy," said William Brownfield, director of the Buand Law Enforcement Affairs, the State Department agency overseeing U.S. drug policy. The trendline is dishearten-

ing for U.S. antidrug officials who for years worked with their Colombian counterparts to attack what were once industrial-size fields of coca. Under the U.S.'s Plan Colombia aid program, more than \$10 billion spent on crop dusters, attack helicopters and training for Colombian antidrug forces helped reduce the size of the crop from 656 square miles in Please see COCA page A4

### Outsider To Be New Chairman At HSBC

By Margot Patrick

LONDON—HSBC Holdings PLC is set to name AIA Group Ltd. Chief Executive Mark Tucker as its next chairman, the first time the bank has hired from outside for the role in its 151-year history.

Mr. Tucker will join the bank in the fall, people familiar with the matter said Sunday, succeeding departing HSBC veteran Douglas Flint. Mr. Tucker, based in Hong Kong, will relocate to London.

Mr. Flint's planned departure is the first step in refreshing the bank's leadership and setting out its next set of goals. HSBC Chief Executive Stuart Gulliver, who has said he would leave once Mr. Flint's successor is in place, is to announce he will leave the bank in 2018, a person familiar with the matter said Sunday.

That announcement, and formal word of Mr. Tucker's joining, is expected to come after AIA confirms Mr. Tucker's departure in an announcement early Monday in Hong Kong.

Mr. Tucker has been at AIA since 2010. He joined the insurer as its former owner, American International Group Inc., readied it for an initial public offering in Hong Kong. Before AIA, Mr. Tucker was chief executive of Prudential PLC, building its Asian franchise in the 1990s, and has been a nonexecutive director at the Bank of England.

Along with resigning from AIA, Mr. Tucker will also step down from the board of Gold-Please see HSBC page A2



**MANHATTAN** U.S. ATTORNEY IS FIRED

U.S. NEWS, A7



**FASHION'S** SOCIAL-MEDIA **WEAPON** 

LIFE & ARTS, A8

### Crowded Trades Add to Risks

eventful week, as an expected Federal Reserve rate increase, Dutch elections and a potential

> By Alison Sider, Corrie Driebusch and Stephanie Yang

step by the U.K. toward exiting the European Union play out amid markets that appear vulnerable to sudden reversals.

Throughout a strong 2017 rally in global stocks and commodities some analysts have worried that improving economic fundamentals were drivleft many asset markets "crowded." Investors with large positions can be quick to retreat on any disappointing news or data, leading to a cascade of selling as similarly positioned traders scramble to reduce risk.

Those fears were borne out in part last week, when oil prices tumbled nearly 9% over three trading days after U.S. crude stockpiles hit a record high. The price declines short-circuited a yearlong rally in which oil prices doubled to more than \$50 a barrel from their February 2016

Traders are bracing for an ing outsize investor bets that low, and left many traders worrying that further declines could be at hand as the market grapples with the true risks posed by a longstanding global supply glut.

"The market ignored and ignored...and then it just gave up," said Dan Pickering, head of the asset-management arm of Tudor, Pickering Holt & Co. "When it gave up, it gave up a lot."

While playing the oil market poses its own unique challenges-from divining the underlying health of the global economy to determining the ef-Please see TRADERS page A2

### U.S. TO REBELS: LISTEN TO MOM

Commandos wage psychological battle to draw last of Joseph Kony's troops out of African bush

By MICHAEL M. PHILLIPS

OBO, Central African Republic—Obira Julius was stretched out on the ground, taking a breather on a slog from one jungle hideout to another, when he heard the voice in the sky. It was disembodied but familiar, a voice from his lost childhood, suddenly floating down to him from a loudspeaker on a passing American helicopter.

At first Mr. Obira wasn't sure. After all, he had last heard that voice 13 years earlier, when he was just 5, on the day the rebels snatched him and two brothers on the way to their grandfather's house. The day they forcibly inducted him into the Lord's Resistance Army, a cultlike group notorious for hacking innocents to death.

Mr. Obira strained to pick out the words as the helicopter flew by. It made a second pass, and this time he had no doubt. It was his mother, calling him home.

"I am asking you to be strong and not to worry

about anything," she said. "Please come home."

Mr. Obira imagined his village in Uganda, two countries away. He imagined his family welcoming him back, despite everything. One afternoon not long afterward, he slipped away from the other rebels and ran for it.

Mr. Obira's defection marked another no-shotsfired victory in one of the most unusual U.S. specialoperations missions anywhere in the world.

In the twilight of the Lord's Resistance Army, American commandos are relying less on kill-capture operations and more on psychological operations to lure die-hard militants out of the bush one by one, using their families as messengers. American helicopters

roam the skies deep in the from mothers and fathers,

center of Africa, blaring recorded come-home messages aunts and uncles. U.S. Army psyop specialists create personalized leaflets with photos of fighters' families, and U.S. planes drop them into

Please see KONY page A6



#### **Modi Win Bolsters His Clout**

**VICTORY:** Prime Minister Narendra Modi speaks following a crushing win for his Bharatiya Janata Party in India's most populous state. The BJP sees the result as endorsing Mr. Modi's decision to cancel 86% of India's paper currency last vear. A4

Good Night, Miss Marple, Christie Is Taking a Dark Turn

Author's estate bloodies up TV adaptations; death by pipe, knife, ax call the murder

By Anna Russell

LONDON-One character has his throat slit at a bloodspattered family reunion, another drinks hydrochloric acid served in a water glass and a girl poisons her grandfather because he won't pay for ballet lessons. On paper, Agatha Christie

staged some of the world's grimmest homicides, springing from greed, rage and unrequited love. On screen, though, adaptations of her stories have largely been bloodless, orderly, English drawing-room puzzles. Some mysteries "cozy crime." "One of my

favorite least words is 'cozy,'" James Prichard, Christie's greatgrandson. just feels wrong. You can't have 'cozy' crime."

In 2015, Mr. Prichard took over from his father the chairmanship of the author's estate, Agatha Christie Ltd., and with that author-

ity has steered the latest TV



adaptations in a darker, menacing direction. married Α

couple sits silently over dinner in a recent BBC production of Ms. Christie's 1925 short story "The Witness for the Prosecution." Then the wife slowly drives a sewing

needle into her thumb. Neither man nor wife flinches. In this latest version, the

Please see AGATHA page A2

#### U.S. NEWS

# May's Brexit Position Is Strong—For Now



If all goes as planned, Theresa May is likely this week to start the formal legal process of Brexit, nine months after the U.K. voted in a referendum to leave the European Union. On the face of it, she will do so from a position of far greater



strength than she could have dared hope when she became Prime Minister last July in the chaotic af-

termath of the referendum. None of the doom-laden

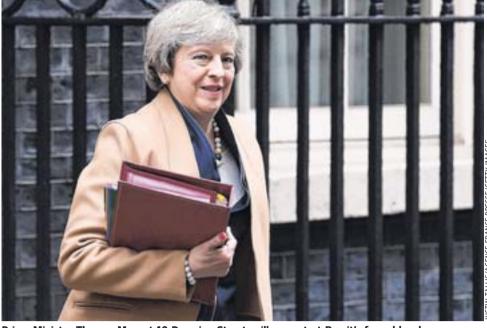
scenarios predicted before the vote have so far come to pass. There has been no constitutional crisis. Sure, a legal challenge established that parliamentary assent was required for the government to trigger Article 50 of the Lisbon Treaty, notifying the EU of the U.K.'s decision to leave. But parliament has not tried to block the process. The House of Lords has put up some token resistance, passing amendments requiring the government to guarantee the rights of EU citizens in the

U.K. and to give parliament a "meaningful" say on the outcome of the negotiations. But the government expects to overturn these this week.

Meanwhile her hand has

been strengthened by the performance of the economy, which appears to have been barely dented by the decision to leave the EU. Growth has remained buoyant, unemployment has continued to fall, house prices have remained steady and consumer confidence is high. That has helped heal the divisions in the Conservative Party, with most of those who backed EU membership now accepting-albeit grudgingly—the referendum verdict. Instead, it is the Labour Party that is in disarray, divided over both Brexit and the party's direction under its left-wing leadership. As a result, Mrs. May finds herself 18 points ahead in the polls.

ut while her position is undoubtedly strong, it may also be brittle. The economy's resilience partly reflects that Brexit has not vet happened, so businesses are continuing to trade as normal, as well as the remarkable strength of consumer spending, financed by a sharp drop in the rate of household saving. But inflation last month hit 3%, reflecting the 20% devaluation of sterling since the referendum, which reduces real earnings. At the same time,



Prime Minister Theresa May, at 10 Downing Street, will soon start Brexit's formal legal process.

businesses are starting to adjust to the prospect of new barriers to trade with the EU following Mrs. May's decision that the U.K. should quit the EU customs union and single market. This was reflected in the government's own latest forecasts published last week that growth would slow to 1.6% in 2018 and 2019, down from an expected 2% in 2017.

Nor can future constitutional crises be ruled out. Scottish first minister Nicola Sturgeon looks increasingly likely to demand a fresh independence referendum depending on the outcome of the Brexit deal. One recent poll showed Scottish voters split 50/50 on whether to remain in the U.K. And while the economic case for Scottish independence looks weaker than it did in 2014, the political commitment to the U.K. may have been weakened by Brexit, which was overwhelmingly reiected by Scottish voters.

Northern Ireland may present an even greater constitutional headache. Post-Brexit, the province will become the only part of the U.K. with a land border with the EU, rais-

ing the prospect of new barriers to trade with the Republic of Ireland that is vital to the Northern Irish economy. These anxieties help explain the unexpectedly strong showing for Sinn Féin in recent Northern Irish assembly elections, where for the first time the republican party came within a whisker of overtaking the Democratic Unionist party.

But Mrs. May's greatest problems may come from within her own party. In the absence of any credible opposition, she is vulnerable to

pressure from the Conservative right wing, whose members want her to take an uncompromising attitude toward the EU negotiations, including walking away from the negotiating table rather than accept what they consider a bad deal. This pressure could come to a head early in the talks, when the EU is expected to present the U.K. with a large bill to settle its outstanding liabilities arising from its current membership. That is something the U.K. insists it will only discuss if the EU agrees to open talks on a new trade deal in parallel.

rs. May's European counterparts question whether she really has the political capital to walk away without a deal. given the likely risk to the U.K. economy. Many in Mrs. May's party clearly share those doubts, which is why some are now urging her to call an early election while her popularity is high to capture a larger majority. But there is no easy way for Mrs. May to call an early election. Instead, she finds herself in a similar position to her predecessor David Cameron ahead of last year's referendum, demanding the EU make concessions to secure her own domestic position. But threatening the EU didn't work for Mr. Cameron: will it work any better for Mrs. May?

### **TRADERS**

Continued from Page One ficacy of the Organization of the Petroleum Exporting Countries' decision to reduce output—many traders warn that the conditions that led to oil's sudden selloff exist in other markets, ranging from U.S. stocks and wealthy nations' government bonds to many commodities.

Central banks pose one hur-

dle to the continuation of the markets' recent successes as the tide of global easy money is turning. Robust U.S. job gains and growing wage pressure nearly ensure the Fed will raise short-term interest rates when a two-day policy meeting ends Wednesday. The U.S. central bank will also likely signal a growing conviction that it will follow through with more rate increases later this year. Meetings at the Bank of England and the Bank of Japan are likely to underscore the idea that additional accommodation by global central

banks, which helped fuel market rallies, is now off the table.

European investors in particular have a busy calendar. In the Netherlands, the party of Geert Wilders, an anti-Muslim nationalist, is now second in polls to the conservative party of the current prime minister—after a long stretch in the lead. A surprisingly strong performance for Mr. Wilders, who wants the Netherlands out of the euro, would likely nudge Dutch yields back up after Wednesday's election. Though Mr. Wilders isn't expected to gain power, investors would interpret support for him as a mark against European integration.

Meanwhile, British Prime Minister Theresa May has made plain she intends to begin Britain's departure by triggering a provision of the European Union's treaty known as Article 50 before the end of this month. If a bill authorizing the government to do so moves ahead this week, it could exacerbate the pound's recent struggles.

For now at least, investors

appear to have accepted the possible changes ahead. The Dow industrials and S&P 500 each have set more than a dozen closing records this year. The CBOE Volatility Index, which rises when investors are fearful of stock-market declines, is on pace for its lowest yearly average on record, according to WSJ Market Data Group. In the past three months, the S&P 500 has posted only one move of more than 1% in either direction. "I've been very surprised at

the market's complacency," said Leo Grohowski, chief investment officer at BNY Mel-Wealth Management. 'Many asset classes are pricing in a fair amount of hope. Hope is never a good investment strategy."

Many investors expect markets to sail through the coming weeks. Futures trading indicates investors believe a Fed rate increase at Wednesday's meeting is nearly a sure thing.

Even with investors' optimism, there is some worry that it wouldn't take much to lead to unruly action in the markets.

Bullish wagers on commodities such as cotton and, until recently, copper have been at alltime highs. Flows into emerging-market stock and bond funds have been rising alongside the prices of commodities those markets export.

Just before oil plunged last week, investors' wagers on rising U.S. oil prices still outnumbered bets on falling prices more than eight to one, with the size of the bullish position near a record hit last month. Many of those bets were based on anticipation that the global glut of oil would fall and that OPEC would keep cutting production for the rest of this year, assumptions that some began to question last week.

Short positions stocks, exchange-traded funds and equity futures recently fell to near their lowest levels in 10 years, according to a report earlier this month by Dubravko Lakos-Bujas, U.S. equity strategist at J.P. Morgan Chase & Co. That has led to more fretting by some in-

#### **Trends With Friends**

Investor bets on rising crude prices, interest rates and stock prices have reached rarefied levels, making those markets potentially vulnerable to sudden reversals.

Net bullish bets on crude oil 400,000 contracts 300,000 100,000 600,000 contracts Net bets on 10-year 300,000 **Treasury futures** -300,000 -600,000 Institutional investor bets on S&P 500 futures 0.2

### AGATHA

Continued from Page One murder victim, described in the original story as a "rich old lady," is reimagined as a sultry widow and played by "Sex and the City" actress Kim Cattrall. In one scene. Ms. Cattrall sits on the edge of a bathtub and feeds her lover strips of meat.

"None of that is Agatha Christie, all the sex and violence and blood." savs Dublin-based John Curran. He previously edited the Official Agatha Christie Newsletter and wrote two books on the

author's work. "I'm a purist when it comes to Agatha Christie," Mr. Curran says. "Everybody knows if you cut your throat there's going to be a lot of blood, so you don't re-

The 2015 adaptation of Ms.

ally need to see it, do you?"

Christie's novel "And Then There Were None," a tale that begins with a group of people summoned to an isolated island haunt, shows nervous breakdowns and explicit killings by pipe, knife and ax.

Ms. Christie, the author of 66 detective novels and 14 shortstory collections, is the best-selling fiction writer of all time, according to Guinness World Records. Since her death in 1976, Ms. Christie also has reigned as the queen of family TV in the U.K., her stories largely cast as cerebral dramas.

Fans debate the merits of various screen adaptations, often aired around Christmas, when they gather at Christie festivals. including the annual affair in the author's hometown of Torquay, Devon. Many say the older TV versions, often centered on the eccentric Belgian detective Hercule Poirot or the grandmotherly Jane Marple, deliver the essence

of Ms. Christie's storytelling. People are killed, of course. But the murders are reliably solved by Miss Marple, between knitting and bird-watching. She lives in the fictional village of St. Mary Mead, in a cottage surrounded by roses, and chips away at the mysteries while dressed in no-nonsense shawls.

Dick Fiddy, TV archivist at the British Film Institute, said some of the earlier adaptations were nostalgic, "like a travelogue for a lost England."

The Christie estate had a motive for its violent turn. By 2013, it had adapted nearly every one of the Marple and Poirot detective novels for TV. "We were kind of staring down the barrel of 'What do we do now?'" says Mr. Prichard, the chairman.

The estate turned its attention toward Ms. Christie's singletitle works, those without detectives, and pushed for a literary update in the vein of the edgy hit TV series "Sherlock."

"People have got very used to Agatha Christie," Mr. Prichard says. "When something becomes part of the furniture, people don't look at it properly.

screenwriter Sarah Phelps. She had never read a Christie mystery and said she grew up thinking they were all "village greens and spinsters on bicycles and twitching curtains."

production company to read "And Then There Were None." In the book's gallows humor and nasty wit, she says, she found Ms. Christie had "a real sense of the English proclivity for sav-

agerv.' The first episode of Ms. Phelps's BBC adaptation drew 9.5 million viewers in the U.K.

when it aired in late 2015. A year

later, her remake of "Witness" had more than eight million viewers. (U.S. viewers can see both on Acorn TV, a streaming

service.) The estate has since signed off on seven new BBC adaptations for the next four years. In November, 20th Century Fox plans to release a film version of "Murder on the Orient Express."

Mr. Prichard, 46 years old, fends off critics by arguing the new productions capture the spirit of his great-grandmother's original work. "This has always been there, in the books," he says. "There's a definite darkness there."

The older TV adaptations cleaned up the mysteries to "turn them into gentle puzzles," says Middlesex University's Jamie Bernthal, who is co-organizing a summer conference, "Agatha Christie: A Reappraisal. "The newer ones are quite willing to shock us, which Christie also did."

Though some longtime fans aren't fully on board, Mr. Bernthal says both arguments have "These are stories in which

people die," he notes. "It's easy to forget that."

2014

Source: Commodity Futures Trading Commission

Continued from Page One man Sachs Group Inc., the people familiar with the mat-

Mr. Flint, alongside Mr. Gulliver, helped HSBC reshape itself and adapt to harsher regulation and lower profitability for banks after the financial crisis. Their five-year strategy plan in 2011 saw the bank rein in its sprawling operations, closing dozens of business and exiting much of Latin America.

After HSBC paid \$1.9 billion in a 2012 settlement over money-laundering lapses, Mr. Flint and Mr. Gulliver oversaw a costly effort to raise financial crime-fighting standards at the bank, which is still subject to a deferred-prosecution agreement that was part of the settlement.

The two men were seen by analysts and investors as a formidable duo, with Mr. Flint becoming a top voice in bank regulation circles, and Mr. Gulliver credited with managing the bank's risks with the eve of the trader he once was. But

some investors had urged the bank not to let Mr. Flint and Mr. Gulliver linger too long, and last year they clarified

THE WALL STREET JOURNAL.

their plans to leave. Mr. Flint became chairman in December 2010 and has been on HSBC's board since 1995, the year he joined the bank as finance director. Mr. Gulliver, at the bank since 1980, became CEO at the start

of 2011. Since starting in Hong Kong in 1865, HSBC has always selected insiders as chairman. even when it meant falling afoul of U.K. corporate-governance recommendations. It had said that this time around it would bring in an outsider.

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Industries Inc.

Author Agatha Christie, in the 1950s, with some of her work.

### **WORLD NEWS**

## Facing Vote, Dutch Leader Leans Populist

Mark Rutte, a fiscal conservative with socially liberal policies, adopts balancing act

By Marcus Walker

ZEIST, the Netherlands—The Dutch prime minister, Mark Rutte, is trying to beat back populism by co-opting it. His message for immigrants to the Netherlands: Adapt or go home.

"If you don't like it here, you can leave," he said while campaigning in the town of Zeist last week, ahead of national elections that could be a bellwether for Europe.

But wary of being seen as a xenophobe, Mr. Rutte said his message applies to everyone-"be it that you are an immigrant, or that your parents and grandparents were born here." Mr. Rutte makes an unlikely

hard-liner on immigration. The multilingual classical-music lover, long known for proglobalization and socially liberal policies, epitomizes a European establishment that is facing a backlash from voters worried about a loss of national identity and Muslim immigration. On March 15, his conservative Liberal party risks losing to the far-right Freedom Party, led by anti-Islam firebrand Geert Wilders.

Mr. Rutte's party has pulled narrowly ahead in the latest opinion polls, according to an average of six major polls compiled by a political scientist at Leiden University in the Netherlands, although many voters say they haven't decided whom to vote for yet.

His balancing act will be closely watched around Europe, as Dutch voters initiate a series



of elections on the Continent this year, including contests in France, Germany and possibly Italy. Mainstream conservatives such as Mr. Rutte, who have been the strongest political force in the European Union in recent years, are tilting further right to blunt the rise of nationalists such as Mr. Wilders or French National Front leader Marine Le Pen.

In France, the presidential candidate for conservative party Les Républicains, François Fillon, has heavily focused on defending French cultural identity. Mr. Fillon's tough talk on Muslim immigrants includes stricter enforcement of secularism, such as bans on headscarves in schools.

German Chancellor Angela Merkel, seeking a fourth term in September, has stepped back from her open-door immigration policy. Her pledges to deport failed asylum seekers faster and ban full-face veils in public institutions are aimed at reassuring voters unsettled by Germany's intake since 2015 of over a million refugees and migrants, most from the Middle East.

In the U.K., Conservative Prime Minister Theresa May has made stronger immigra-

tion controls a priority for the country's future relations with the EU. Opposition to unfettered migration from the rest of Europe played a major role in last year's referendum vote to leave the EU.

Toughening immigration policies, emphasizing national identity and criticizing the EU can work for mainstream conservatives in the short term, said Catherine De Vries, professor of European politics at the U.K.'s Essex University.

"In terms of gaining power, it's not a bad strategy. But it's very difficult to silence the far right," she said. "By giving more of a platform to these concerns, it may also help people like Wilders to grow."

Mr. Rutte made his mark as a fiscal conservative with liberal social policies. He has spent most of his time as prime minister since 2010 dealing with the fallout from Europe's financial crisis. During those years, parts of Dutch society have turned more critical of European integration and of Muslim minorities who are viewed as reluctant to accept the Netherlands' secular, liberal values.

The Freedom Party under the flamboyant Mr. Wilders, who says the country should

close mosques and ban the Quran, has become the most popular party in opinion polls, although its lead over Mr. Rutte's Liberals is fading.

Polls point to a highly fragmented parliament. With most Dutch voters still in the middle ground, centrist parties are poised to make gains, although Mr. Rutte is the favorite to lead a multiparty coalition even if his Liberals come second to Mr. Wilders's group, as no party is willing to join with the far-right

Mr. Rutte launched his election campaign with a full-page letter to the nation published in several newspapers, in which he complained of antisocial behavior by people who don't accept Dutch norms. He attacked those who, he said, come to the Netherlands because of its freedoms, but then refuse to shake women's hands, harass gay people and accuse the Dutch of being racists. "Behave normally or leave," he wrote.

In Zeist, the premier denied he has shifted rightward in pursuit of Mr. Wilders' voters.

"My position is still the same as in the last six years," Mr. Rutte said while mingling with voters and reporters. "I want to make very clear what our values are, particularly to people coming from outside."

Locals worried about immigration don't all buy Mr. Rutte's pitch. "Telling people to get lost—it's very populist," said Janny van de Beek, a psychologist. She is voting for a small conservative group, Forum for Democracy, that she says has a more concrete plan than Mr. Rutte's Liberal party to tighten immigration and loosen ties with the EU.

-Maarten van Tartwijk contributed to this article.

### Netherlands Expels Turkish Minister, Inflaming Dispute

By Emre Peker AND VALENTINA POP

BRUSSELS—A war of words between Turkey and the Netherlands escalated over the weekend, sparking a diplomatic crisis between the two North Atlantic Treaty Organization allies ahead of critical polls in both countries.

The feud between Turkey and the Netherlands, which had been brewing for days, boiled over Saturday night when Dutch authorities deported a Turkish minister from Rotterdam as she attempted to hold an unauthorized political rally.

Turkish reaction was swift: Government officials accused officials in the Netherlands of being fascists and Nazis. They said the Dutch ambassador to Turkey, who is currently abroad on leave, wasn't welcome back for a while, and threatened diplomatic, political and economic retaliation unless the Netherlands apologized for the incident.

"Turkey is a partner. We are interested in normalizing relations but we can't be bullied," Dutch Prime Minister Mark Rutte's spokesman, Tim Versnel, said in an interview. The Netherlands would never meet Turkey's demand for an official apology, he added.

A rally of Turkish expatriates turned violent in Rotterdam, Mr. Versnel said, while demonstrators staged protests outside the Netherlands' missions in Ankara and Istanbul. Turkish hackers also claimed attacks on Dutch targets, including one that downed the Rotterdam-The Hague airport website. It was back online by Sunday evening.

The spat with Turkey, on which European countries depend to curb refugee flows



Turkey's President Erdogan greeted supporters Sunday in Istanbul.

from the Syrian war, comes ahead of Wednesday's Dutch elections and votes in France and Germany this year. In all three countries, nationalist politicians have been benefiting from anti-immigrant sentiment.

'The situation is now dam-

aging to diplomacy and democracy. We cannot allow it to escalate any further," said Thorbjorn Jagland, secretary general of the Council of Europe, whose 47 members include Turkey and European Union countries.

The Netherlands denied requests for Turkish rallies that Mr. Rutte said threatened to fuel domestic tensions, as his main rival Geert Wilders of the far-right Freedom Party campaigns on a platform of expelling Muslims. That move angered Turkish

officials, who are campaigning in Turkey—and in European cities like Rotterdam with large Turkish populations—for a yes vote in an April 16 referendum on whether to expand President Recep Tayyip Erdogan's powers. Polls suggest a very close race, in which Mr. Erdogan needs nationalists' support to win.

The Netherlands first rejected Turkish Foreign Minister Mevlut Cavusoglu's bid to hold a rally in Rotterdam, then refused him a landing permit in the Netherlands when he said he would come anyway. Then Turkish Family and Social Policies Minister Fatma Betul

Sayan Kaya drove Saturday night from Germany, where her rallies were also banned, to campaign from Turkey's consulate in Rotterdam.

She was instead escorted by Dutch authorities back to Germany, angering some 1,000 Turks gathered to hear her speak outside the Turkish mis-

Turkish officials took to the airwaves on Sunday, slamming the Netherlands for what they called succumbing to Mr. Wilders and his politics. Progovernment media portrayed the incident as the resurgence of fascist policies and argued that it was fueled by Europe's dislike of Mr. Erdogan.

"Those who want to give Turkey a lesson on democracy should first learn about it,' Mr. Erdogan said Sunday. Criticizing the Netherlands over the minister's deportation, he said, "You will pay for this."

### WORLD WATCH

#### **Suicide Bombings** Kill More Than 40

A double suicide bomb attack targeting Shiite pilgrims in Damascus killed at least 40 Iraqis traveling to a shrine to pray, Iragi and Syrian officials said.

The al-Qaida-linked Levant Lib eration Committee, claimed responsibility Sunday for the attack, saying it was aimed at pro-Iranian and pro-government militiamen. the Associated Press said.

The attack took place at a bus station where the pilgrims had been brought to visit the nearby Bab al-Saghir cemetery, named after one of the seven gates of the Old City of Damascus. The second blast went off some 10 minutes after the first inflicting casualties on civil defense workers who had gathered to care for the casualties. the Lebanon's al-Manar television station reported. Saturday's attack also wounded more than a hundred people, most of them Iragis, according to Syrian and Iraqi officials. -WSJ Roundup

#### **U.N.** Warns of Large **Humanitarian Crisis**

The world faces the largest humanitarian crisis since the United Nations was founded in 1945 with more than 20 million people in four countries facing starvation and famine, the U.N.



Children played on the bank of the Buriganga River in Dhaka, Bangladesh, on Sunday.

humanitarian chief said. Stephen O'Brien told the U.N.

Security Council that "without collective and coordinated global efforts, people will simply starve to death" and "many more will suffer and die from disease."

He urged an immediate injection of funds for Yemen, South Sudan, Somalia and northeast Nigeria plus safe and unimpeded access for humanitarian aid "to avert a catastrophe."

To be precise," Mr. O'Brien said, "we need \$4.4 billion by July." Without a major infusion of money, he said, children will be stunted by severe malnutrition and won't be able to go to school, gains in economic development will be reversed and "livelihoods, futures and hope will be lost.' U.N. and food organizations

define famine as when more than 30% of children under age 5 suffer from acute malnutrition and mortality rates are two or more deaths per 10,000 people every day, among other criteria. -Associated Press

**NIGERIA** 

#### **President Returns** From U.K. Treatment

Nigerian President Muhammadu Buhari returned home after seven weeks in the U.K. for

unspecified medical treatment, amid lingering questions about his health and ability to govern Africa's most populous nation.

Officials said Vice President Yemi Osinbaio would continue to handle state business in Africa's second-largest oil exporter while 74-year-old Mr. Buhari convalesces. A statement issued by the president's office said he would undergo follow-up medical tests in the coming weeks. On Monday, he will send a letter to lawmakers to make "his return to work formal and constitutional," presidential spokesman Femi Adesina said.

-Gbenga Akingbule and Gabriele Steinhauser

### U.K.'s Brexit Minister **Urges Smooth Process**

LONDON—Britain's minister for leaving the European Union urged lawmakers not to restrain Prime Minister Theresa May's freedom to negotiate a Brexit deal in talks she could trigger as early as this week.

David Davis on Sunday called on lawmakers to vote to drop two amendments that were added to a bill authorizing the talks with the bloc's other member states, saying Mrs. May should be able to enter with no strings attached.

The bill returns to the House of Commons, the U.K.'s lower house, on Monday for debate after the House of Lords said it wanted guarantees that EU citizens living in the U.K. could stay after Brexit and that Parliament could vote on the final terms. The final bill must be approved by both houses.

"Please don't tie the prime minister's hands," Mr. Davis said in an interview with the British Broadcasting Corp. He wouldn't say when the government intended to formally start talks by triggering Article 50, other than that it would happen before the end of March, as

Mrs. May has said previously. If the bill is passed on Monday, the government could invoke Article 50 as early as

Tuesday, but the back-and-forth

in Parliament could go on for several days. The Brexit spokesman for the main opposition Labour Party, Keir Starmer, told Sky News he expects the government to trigger it on Wednesday or Thursday.

Even if the House of Commons votes in favor of the amendments, led by a handful of pro-EU Conservative lawmakers, Mrs. May is expected to keep her timetable of triggering by the end of the month. But it would underline how small her majority is in the lower house.

Mr. Davis said the first issue the U.K. will deal with in negotiations is securing the rights of EU citizens living in the U.K. and British citizens in the bloc. He said there was a "moral responsibility" to provide certainty, but that the government couldn't give early guarantees because the issue has to be resolved with other EU countries.

He also said it was unlikely that negotiations with the EU would break down, but the government was putting contingency plans in place in case they did.

If the U.K. and EU don't strike a deal, Britain will default to trade tariffs set by the World Trade Organization. Some pro-EU politicians and business executives say this would be disastrous for the economy.

# Fukushima Mystery Dogs Nuclear Industry

Uncertainty over cause of disaster thwarts reopening of most of Japan's reactors

By Alastair Gale AND MAYUMI NEGISHI

OKUMA, Japan—Six years after Japan's nuclear disaster, popular resistance has stymied efforts to rebuild an atomic energy industry that was once among the world's biggest, as mysteries endure over the ca-

Authorities are struggling to determine what precisely happened after the March 11, 2011, earthquake and tsunami crippled the Fukushima Daiichi nuclear reactors here, triggering an evacuation of thousands of people and costing over \$180 billion in cleanup and compensation costs.

Recent missions to survey the damage using a 2-foot-long scorpion-shaped robot with cameras to crawl inside a reactor have failed to yield a good picture of where the highly radioactive molten fuel is inside. Without that answer, decommissioning can't begin. Also unclear is what role the quake played in damaging the reactors and how the meltdown began.

"Hardly any of the truth of the accident has been uncovered," Mitsuhiko Tanaka, an engineer who helped build one of the reactors at the Fukushima plant, said at a recent news conference.

That only adds to widespread concerns over safety that have thwarted all but three of the more than 40 remaining reactors in Japan's 16 nuclear plants from being brought back into service after a complete shutdown following the disaster. The governor of Niigata prefecture, who was elected in October on an antinuclear platform, has said that he would oppose any attempt to restart the nation's largest nuclear plant, located in his prefecture, without more information about what hap-



A worker in protective clothing at the Fukushima plant in February, six years after it was shut down

pened in Fukushima.

Japan's shift away from nuclear power is part of a larger trend in many nations. In both Japan and the U.S., the availability of inexpensive naturalgas supplies has accelerated nuclear power's decline.

"Cheap and abundant natural gas means construction of nuclear-power plants just doesn't pay," said Dale Klein, a former chairman of the U.S. Nuclear Regulatory Commission who is now an adviser to Fukushima plant operator Tokyo Electric Power Co.

Still, Japan's reliance on energy imports suggests the battle over whether to restart many of Japan's nuclear plants will continue. That makes Fukushima's resolution critical for more broad acceptance of the energy source.

The Fukushima disaster triggered a meltdown of fuel rods in three of the four operational reactors, spilling fuel

that burned into the reactor floors. Radiation inside the reactors remains strong enough to kill humans in minutes.

Tokyo Electric Power, known as Tepco, aims to come up with a new road map for decommissioning this summer, but it is still unsure what it will have to clean up. The process is expected to take another three or four decades to complete.

Tepco's scorpion-shaped robot became immovable after failing to climb over radioactive material. Another robot. designed to clear the way for the scorpion probe, had to return after just two hours when two of its cameras went dark after its cumulative radiation exposure reached 1,000 sieverts, dozens of times the level that would kill a human.

"All we've been able to get is a brief peek inside," said Shunji Uchida, who became chief of the crippled plant last July, during a recent visit by The Wall Street Journal.

Tepco has taken pains to make data from its work publicly available, such as the findings of investigation committees as well as real-time radiation readings. While the company says it has only a limited understanding about what occurred inside the reactors, it has said its understanding of the meltdown is improving.

It is still unclear where Tepco will put the debris once it is located and removed. Late last year a huge steel case was placed over the Chernobyl nuclear-power station in Ukraine, site of the 1986 disaster, to cover the remnants of the plant. People in Fukushima are strongly opposed to keeping nuclear waste at the plant, hoping to clear the taint attached to the region's name. Lower radiation in nearby towns has helped the government trim back evacuation zones, but it has proven difficult to re-establish commu**Fallout** Six years after the Fukushima accident, local opposition has blocked most nuclear plants from restarting. Status of nuclear plants **Epicenter** ■ Shut down of the **2011** Operational Tohoku Under construction earthquake Kashiwazaki-Kariwa faces opposition from antinuclear Gov. Ryuichi Yoneyama, elected in October Daiichi Takahama No.3 and No.4 reactors. restarted last year, remain shut down Ikata's No.3 reactor following a March restarted in August 2016 court injunction Sendai's No.1 and No.2 reactors restarted in 2015

Sources: Japan Nuclear Technology Institute (locations); staff reports (plant status) THE WALL STREET JOURNAL.

In Naraha town, 12 miles south of the plant, only 10% of residents have returned to live in their homes as of February after the evacuation order was lifted in September 2015. The main road leading to the plant is busy in mornings and evenings as more than 6,000 workers commute, but many buildings in the town remain abandoned.

During a recent visit, Tepco workers helped sort boxes of books and equipment at the newly built Naraha Elementary and Junior High School, which is due to open when the academic year starts in April. The school replaces three others and will have just 115 pupils, compared with a combined total of 600 before the accident. "It's difficult to live here, but to wait for it to fully recover would mean many children wouldn't come back at all." said a vice principal, Hiroshi Horiuchi, whose own home near the power plant remains off-limits.

Next to the school baseball field, a giant dosimeter measures radiation levels, while fields a few miles away hold hundreds of black bags with contaminated soil.

Hideyuki Yanai, vice principal of one of the old elementary schools, said teachers know that some students from Fukushima have been bullied. "We'll do our best to encourage the children to have pride in the fact they were born and

Park Geun-Hye arriving at her private residence in Seoul

### South Korea's Ousted President Exits Palace

statement on behalf of Ms.

ing my duties as president and

thank those who have believed

and supported me," said the

spokesman. "It may take some

"I apologize for not fulfill-

Park following her arrival.

By JONATHAN CHENG AND EUN-YOUNG JEONG

SEOUL-South Korea's former president. Park Geun-hve. returned to her private residence in Seoul on Sunday, vacating the presidential palace more than two days after she was removed from office by the Constitutional Court.

Ms. Park's exit brings another measure of closure to a six-month political scandal that has inflamed political passions across the nation.

But attention has already turned to the possibility of criminal charges tied to the

political corruption scandal that brought her down, while the race to succeed her in a snap election has intensified.

Ms. Park left the presidential Blue House Sunday evening after bidding farewell to several hundred staff members and sharing tea with her senior aides, including her chief of staff and the head of presidential security, according to a statement from her office.

and waving the national flag.

A former presidential Blue House spokesman delivered a

As she arrived home, Ms. Park was greeted by elderly supporters chanting her name

time, but I firmly believe that the truth will be revealed," he added, alluding to Ms. Park's

continued denial of wrongdoing in the corruption scandal. It was the second time she had moved away from the Blue House, where she grew up as the daughter of the longest-serving president, Park Chung-hee, until

his assassination in 1979. Ms. Park will now be a pri-

brick house in the Gangnam neighborhood of Seoul, though prosecutors will be under pressure to bring criminal charges against her, now that she has been stripped of her presidential immunity.

Ms. Park has refused questioning by prosecutors and didn't testify before the Constitutional Court, speaking of the scandal only in prepared statements and a formal interview with a media outlet.

Last November, prosecutors said Ms. Park was an accomplice to her friend, Choi Soonsil, in a bribery case that has ment of dozens, including Lee Jae-yong, the de facto leader of the sprawling Samsung conglomerate. A spokesman for the presi-

vate citizen, living in her red led to the arrest and indict-

dent's office said at the time that those accusations were "built on imagination and connecture," and accused the n ecutors of political bias.

While Ms. Park is the first president in the country's history to be removed by impeachment, some of her predecessors, many of whom left office in disgrace, were charged and convicted after leaving the Blue House.

### Party Victory in India Gives Modi Freer Hand

By Niharika Mandhana AND RAYMOND ZHONG

NEW DELHI-Prime Minister Narendra Modi is riding into the second half of his term with more political capital to expand his anticorruption crackdown and promote economic development after his party's resounding electoral victory in India's most-populous state.

Although his political opponents will still be able to block contentious legislation in Parliament, this weekend's wins will give Mr. Modi greater freedom to use executive action to advance his agenda ahead of a likely re-election

"These elections will start a bigger movement for development." Mr. Modi said in a speech to his party's workers on Sunday. "We will take this new India to great heights."

Mr. Modi crushed his rivals in Uttar Pradesh, which is home to one in six Indians. His Bharatiya Janata Party won more than three-quarters of the seats in the state's legislature in results declared on Saturday. It also won an election in the Himalayan state of Uttarakhand, but was defeated in the agrarian state of Puniab.

Finance Minister Arun Jaitley said in a televised interview that the outcome in Uttar Pradesh delivered a strong

message to the government: "Go ahead without the fear of consequences and people will support you in the national

The BJP sees the win as an endorsement of Mr. Modi's decision in November to cancel 86% of India's paper currency. Millions had to line up at banks to redeem notes. But Mr. Modi cast his move as a crusade for the poor against wealthy taxdodgers. He is now likely to widen his war on illicit wealth.

'The perception that he has gone after the corrupt has served him well and whetted people's appetite for more,' said Ashok Malik, a fellow at the Observer Research Foundation, a New Delhi-based think tank.

His government could require property sales to be better documented, said Shailesh Kumar of the Eurasia Group, a New York-based consultancy. Mr. Modi could also impose controls on purchases of gold, another common store of

There is a risk such executive-led moves could backfire and hurt the economy, Mr. Kumar added, should the prime minister undertake them without adequate planning. Mr. Modi and his inner circle crafted last year's cash cancellation in secret, and the rollout was chaotic in many places.

Continued from Page One 2001 to 301 square miles in 2012, cutting into drug organizations' operations.

But then came a sharp reduction in fumigation and its eventual mothballing in 2016. Farmers here in this cocagrowing region and other isolated corners of Colombia don't dispute that they moved more decisively into coca as the fumigation program faded.

"People are planting as much as they can; people want to make money," said Ramón Angarita, 50 years old, as he stood in a field of coca. "If they fumigate coca, will you plant it? No. You have to plant what they won't fumigate."

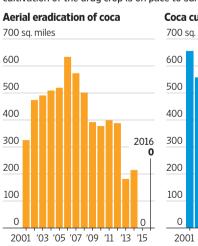
Colombian government officials acknowledge that coca production surged during peace talks with the rebel the Revolutionary Armed Forces of Colombia, or FARC, which began in late 2012 and culminated in a peace pact last year.

They argue aerial spraying had become inefficient, posed health problems and bred resentment among poor farming communities. fueling FARC's influence among peasant farmers. Under the peace settlement, the government and the FARC agreed to work together to destroy coca, which for many years was the primary funding source for the rebels' war against the state.

The government's current

### **Better Growing Conditions**

As the fumigation by air of Colombia's coca has fallen and stopped, the cultivation of the drug crop is on pace to surpass its 2001 peak

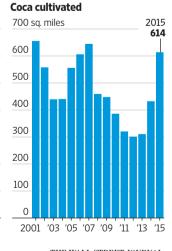


Note: 1 sq. mile = 258.999 hectares ources: The White House

plan to fight coca seeks to benefit from the new calm the peace process has fostered in the countryside. Under the plan, farmers would voluntarily eradicate 193 square miles this year in return for aid in growing legal crops. An additional 193 square miles, authorities estimate, are to be forcibly eradicated by new police and army teams. "We have to attack the

crops, tear out the plants,' said Major General José Ángel Mendoza, head of the antinarcotics unit of the Colombian National Police.

The government and others, however, don't see forcible eradication as a long-term solution. "It's not going to solve



THE WALL STREET JOURNAL

the underpinning problem that led to illicit cultivation in the first place," said Bo Mathiasen, head of the United Nations Office on Drug Control in Bogotá. What feeds coca production, he suggests, is poverty and the lack of legal earning prospects in the countryside.

To wean farmers off coca, the government is establishing programs to provide as much as \$12.000 a family over two to three years, as well as technical assistance, to turn them toward cultivating other crops, such as spices, papaya, and cacao.

At Lucenit Figueroa's farm here in El Tarra, coca grows in neat rows on hillsides and in a picturesque valley. She em-

ploys workers who mix the

coca with gasoline and chemicals to form coca paste, the last stage before its production into cocaine. She said she would give it all up if she could make a go of it with a

"A subsidy, anything, it's all welcome," she said. "But we need the government to deliver—because if you tear it out and they don't deliver, then what are you left with?"

The end of conflict with the FARC—and of rebels shooting at forces deployed to eradicate coca-should permit "much more ambitious, long-term development," said the government's peace commissioner, Sergio Jaramillo, who negotiated a countryside modernization program as part of the settlement with the FARC.

But Mr. Jaramillo and other officials well-versed in the realities of Colombia's vast, largely forgotten countryside say a quick turnaround won't be easy. Even if coca farmers switch to legal crops, their success is uncertain in light of high transportation costs along barely passable roads.

El Tarra, where the drug culture is so entrenched that some people pay for groceries with coca paste, is six hours by bumpy, muddy and rocky road from Cúcuta, a regional hub that is itself far from Colombia's economic heart.

Those realities aren't lost on Jesús Oscuro, 26, whose fields are covered in coca.

"It's the only plant that makes it here," he said. "We don't have anything else."

### U.S. NEWS

# When Stocks and the Fed Align

the Federal Reserve to raise short-term interest rates this week, so why is the stock market so happy?

The prospect of higher borrowing costs has been a source of panic for stocks in the past, vet major stock indexes are hitting fresh records. The reason: The economy is strengthening, U.S. corporate earnings are grow-

THE OUTLOOK **HARRIET** TORRY **AND CORRIE** DRIEBUSCH

ing again, and rates aren't expected to rise much or quickly, investors and analysts said. "It's not

when the Fed tightens that causes a bear market, it's when the Fed tightens too much," said Richard Bernstein, chief executive of asset manager Rich-

ard Bernstein Advisors LLC.

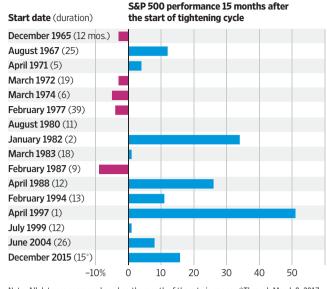
The S&P 500 has gained 16% since the Fed began to raise rates 15 months agothe best performance at this stage of a so-called tightening cycle, as such a series of rate increases is known, in two decades. Performance is measured as an S&P average based on the month of the rate increase.

On the surface, it's a counterintuitive development. While stocks have posted gains at this point in a tightening cycle about two-thirds of the time since the mid-1960s, rising rates are generally viewed as negative for shares. Higher borrowing costs dent corporate profits and household wealth, while they increase returns on savings. Back in 2013, markets sold off in a so-called "taper tantrum" on signals the Fed was preparing to wind down its bondbuying program, which aimed to spur hiring and inflation by holding down long-term rates.

This tightening cycle is different," said Patrick Schaffer, global investment specialist at J.P. Morgan Private Bank. The Fed is moving rates only slightly higher

#### **Higher Hand-in-Hand**

The Federal Reserve is expected to raise interest rates at its meeting this week, 15 months after it started its current tightening cycle. At the same point in tightening cycles in the past, stocks have typically recorded gains, contrary to the popular belief that higher rates are negative for share prices



Note: All data are averages based on the month of the rate increase \*Through March 9, 2017 Sources: S&P Dow Jones Indexes via Haver Analytics (S&P 500); Federal Reserve (rate target); Deutsche Bank (length of tightening cycles)

Fed Move Signals Return to Normal World

THE WALL STREET JOURNAL.

from an already-low base and plans to raise them grad-A major tailwind for

stocks are expectations the Trump administration will boost economic growth by cutting taxes, loosening regulation and spending more on infrastructure and the military, investors say. They see the prospect of a rate increase this week as confirmation the central bank sees a bright economic outlook.

"Markets and the Fed are on the same page," said Randall Kroszner, professor of economics at the University of Chicago Booth School of Business, and a former Fed

hat's a relatively new development. Since the Fed began raising rates in late 2015 after holding them near zero for seven vears, markets consistently and correctly judged officials' forecasts about the pace of rate increases to be overly

optimistic. At the start of last year, the Fed anticipated it would lift rates four times in 2016, in quarter-percentagepoint steps. Instead, it moved just once, in December.

Market expectations for a rate increase at the Fed's meeting this Tuesday and Wednesday were minimal until just a few weeks ago. At its most recent meeting, Jan. 31- Feb. 1, it left its benchmark federalfunds rate unchanged in a range between 0.50% and 0.75%, and gave no hint then about when the next increase might occur. Traders then saw less than a 20% probability of a rate rise this

Since then the economy has stayed on track. Employers added 235,000 jobs in February and the unemployment rate fell to 4.7%. Inflation has ticked up closer to the Fed's 2% target, while earnings for companies in the S&P 500 rose in the fourth quarter, marking

the second straight quarter of earnings growth after five quarters of declines, according to FactSet.

Meanwhile, the financial markets' "Trump rally" has continued, sending the Dow Jones Industrial Average over the 21000 mark for the first time earlier this month.

The markets' strength, despite the Fed's rate increase in December and plans for raising them more this year, suggests officials have a window to raise rates again in March without triggering financial turmoil, investors say.

It's an opportunity Fed officials have signaled they're ready to take. Fed Chairwoman Janet Yellen said March 3 that a rate increase likely would be appropriate this month if economic data meet expectations, echoing earlier statements from senior Fed policy makers.

Fed move this week would give it an early start on its plans to raise rates three times this vear, likely in quarter-percentage-point steps, a pace it describes as "gradual." Market participants appear comfortable with that. Fed-funds futures, used by traders to wager on interest-rate moves, see an 88.6% probability of a rate increase this month, and a 62.1% probability the Fed will lift rates a total of three times or more by the end of this year.

Some economists say the stock market's optimism is out of whack with an economy that has been expanding at a modest pace for nearly eight years.

However, Federal Reserve Vice Chairman Stanley Fischer said surging asset prices have almost certainly made some people feel wealthier and therefore likely to spend more money, which he said bodes well for the future.

"If there has been a conscious effort" by Fed officials to boost expectations of a rate rise this month. "I'm about to join it," he said

### Republicans Pose Threat to Trump On Trade Agenda

By William Mauldin AND JACOB M. SCHLESINGER

WASHINGTON—Republican lawmakers are showing increasing resistance to President Donald Trump's trade agenda, worried that his plans could hurt exports from their states and undermine longstanding U.S. alliances.

The concerns indicate that the biggest threat to Mr. Trump's trade policy—which emphasizes new bilateral deals and a tougher stance against countries blamed for violating trade rules—is coming from his own party. The opposition from Republicans, who control both chambers of Congress, stands to complicate Mr. Trump's efforts to overhaul the North American Free Trade Agreement, or Nafta, and tackle alleged trade violations in China.

"We want to support him on all those things; we're not there yet," said Sen. Jim Inhofe (R., Okla.), whose state depends on aerospace and agricultural exports.

While many Democrats in Congress are interested in working with the Trump administration. Republicans who have long backed free trade many of them close to business groups-are warning that imposing tariffs could lead to retaliation against U.S. goods. Lawmakers from farm states are upset that Mr. Trump in January pulled out of the unratified Trans-Pacific Partnership, or TPP, the 12-nation trade agreement that Barack Obama negotiated.

"I'm more concerned about what they might do renegotiating existing agreements than what they do bilaterally with countries they don't have agreements with," said Sen. Chuck Grassley (R., Iowa), a member of the committee that oversees trade. "We know what we have, and I guess I don't think it's as bad as what the president thinks it is," he said, citing Nafta, which opened markets for farm exports.

Mr. Trump rode a wave of economic discontent to the White House, threatening to undo traditional U.S. trade policy and challenging the orthodoxy of Republican lawmakers who have long backed freer trade. Since then, few members of the president's party—or allied big business groups—have challenged him openly on the

But as the administration's trade agenda moves forward on several fronts, lawmakers are voicing their reservations. Those concerns are expected to be on display this week as the Senate Finance Committee grills Robert Lighthizer, Mr. Trump's nominee for U.S. Trade Representative.

"My concern is that they're making it too difficult to enter into trade agreements," said Sen. Cory Gardner (R., Colo.). "I'm concerned that when we remove ourselves from the playing field of multilateral opportunities, our trading partners will look elsewhere for leadership-and that leadership can come from countries that don't follow the same norms and values that we do." he added, alluding to China's attempts to fill the void in Asia following the U.S. withdrawal from the TPP.

Mr. Trump recently sent to

Congress a trade policy agenda that backs an aggressive reliance on rarely used U.S. law to punish trading partners and questions the authority of the Geneva-based World Trade Organization as an arbitrator of international disputes. House Republicans who oversee trade issues fired back a strong statement backing the WTO and existing U.S. agreements.

Also, House Speaker Paul Ryan (R., Wis.) in December raised objections to legislation that would require the use of American-made steel in U.S. water infrastructure projects.

Mr. Trump's pledge to renegotiate Nafta is expected to provide an early test of congressional support for his policies. U.S. lawmakers took note when a Mexican lawmaker introduced legislation favoring Latin American products over American-exported corn, a key winner in Nafta. That move followed warnings from Mr. Trump that Nafta would be renegotiated and Mexico would have to pay for a new border

"I have been worried because other countries have pushed back: 'You want us to build a wall, well we're not going to take your corn," said Sen. Joni Ernst, an Iowa Republican, who said she was "very disappointed" Mr. Trump pulled out of the TPP. "If we're talking about renegotiating Nafta, we actually stand to lose ground in agriculture-so we would really have to work that very, very carefully."

Mr. Trump follows through on threats to raise tariffs "it could cause some dire economic consequences," said Utah Republican Sen. Mike Lee. "I hear about it constantly when I talk to people throughout my state." Mr. Lee, who has long backed a greater role for Congress, this year introduced a bill that would strip the president of powers to impose tariffs without congressional approval.

Congress has grown more polarized on trade in recent years, with Democrats allied with labor unions critical of Nafta and other deals.

Sen. Sherrod Brown (D., Ohio), who began working with Mr. Trump and his advisers a few days after the November election, says he is concerned congressional Republicans may get in the way.

"I'm worried that it's going to be an ongoing fight between the president and his promises on the one hand, and Republican leadership, who are usually in the tank with companies," Mr. Brown said. "If they think he's such a great president, I would hope they'd support his agenda."

Others say they are waiting to see just what measures the Trump trade team will actually implement, and who will prevail among his diverse group of advisers who range from hardliners advocating a sharp turn, to finance leaders steeped in the advantages of globaliza-

"Honestly there has been some inconsistency," said Sen. John Cornyn (R., Texas), a member of the Senate Republican leadership as well as the committee overseeing trade. "Some of the rhetoric has been a little jarring, but what really counts is what they do."



A few months ago, virtually no one expected the Federal **Reserve** to raise interest rates this week. Now, almost every one does.

The reason for the shift? The world is looking more normal. And in a normal world, interest rates need to

ANALYSIS

path of increases still looks leisurely. Yet a normal world also implies a

rise. As yet, the

greater risk that the Fed will respond to good news by stepping up the pace of increases or starting to shrink its large bond portfolio.

In recent years, little seemed normal, and the Fed's behavior was decidedly asymmetric: bad news delayed rate increases, but good news didn't speed them up. Central bank officials began both 2015 and 2016 projecting three to four quarter-percentage point rate increases, and in both years delivered just one, in De-

When the Fed began 2017 projecting three rate increases, many investors assumed it would, once again, drag its feet. Two weeks ago officials put them right with a series of public comments that were the equivalent of slapping the market in the face and screaming, "Wake up!"

Two key factors explain why the increases didn't materialize as planned over the past two years.

The first was a significant rethink of some fundamental features of the economy. Officials long thought unemployment could comfortably sit between 5.2% and 5.5% without generating inflation. Then actual unemployment fell below that level in mid-2015 and stayed there with no sign of inflation and little of wages picking up. The Fed responded by revising down its estimate of the "natural rate" of unemployment to between 4.7% and

This meant officials thought the economy still had unused



Fed officials seem content with three rate increases this year. Above, Chairwoman Janet Yellen.

slack even as unemployment fell, weakening the case for higher rates. Now, with unemployment at the lower end of their new estimate of the natural unemployment rate and expected inflation perking up, there is less case for waiting.

Officials also thought two years ago they had to get started raising their benchmark federal-funds rate from near zero because they had a way to go to reach the 3.75% rate appropriate for containing inflation over the long run. As officials turned pessimistic on the economy's growth prospects, they cut their estimate of where rates are heading in the long run to 3%. That added a cushion in which to delay rate increases. However, two years later that cushion for delay is almost gone.

The second factor which had held back the Fed was a series of shocks: a collapse in the price of oil, starting in 2014; a bout of turmoil surrounding the stability of China's currency; and a vote in Britain to leave the European

Those events didn't change direction. So ... the risks to the

where the Fed thought growth and inflation would end up. But officials set rates not just according to their forecast but to what will happen if they're wrong. Cheap oil, China turmoil and Brexit all raised the threat that growth, inflation or both could slide toward zero and the Fed had precious little ammunition with which to respond. By contrast, they had all the rate ammo they needed if growth and inflation took off. So they chose to err on the side of raising rates too slowly than too quickly. They are no longer content

with that trade-off. As oil prices stabilized and then rose, so did expected inflation. Mr. Trump's victory has raised the prospect of lower taxes, more spending on military and infrastructure, and a lower regulatory burden on business. Officials haven't seen enough evidence to mark up their forecasts much. But as Bill Dudley, president of the Federal Reserve Bank of New York said last month, "We do

know that fiscal policy is going

to move in a more stimulative

outlook are now starting to tilt to the upside."

Officials seem buoyed by the same confidence that has washed over the market. In her speech on March 3 laving the groundwork for this week's move, Fed Chairwoman Janet Yellen used words such as "strength," "growth" and "confidence" more than any other Fed speech since 2010, according to Bianco Research, a financial research firm.

So far, Fed officials still seem content with three rate increases for the year. The acceleration in job creation has been met by rising labor-force participation, evidence of more slack and less inflationary pressure than the low unemployment rate implies. Oil have dropped, which could weigh on both inflation and business investment.

Still, now that Fed officials have put equal weight on upside and downside risks, the clear message for investors is that any good news they celebrate in coming months comes with an asterisk: it raises the odds of tighter money.



American corn over American-exported corn.

#### IN DEPTH

### KONY

Continued from Page One the bush by the hundreds of thousands. American soldiers produce individualized family pleas to broadcast on jungle radio stations.

The American and Ugandan soldiers "are not there to harm you," Mr. Obira's mother said in her helicopter message. "They will bring you home safe.

Mr. Obira, now 19 years old and back in Uganda under the protection of the nation's amnesty program, recalled the moment he realized his family wanted him back, no matter what he might have done as a rebel: "I cried on the inside, because I didn't want anybody to see me cry."

Once a force that inspired terror through a huge swath of Central Africa, the Lord's Resistance Army is now reduced from some 8,000 fighters to perhaps 150, most of them believed to be on the move in small groups along the border between Central African Republic and the Democratic Republic of the Congo, according to the U.S. and Ugandan militaries. They are expert at surviving in a landscape that alternates between thickly canopied forest and exposed clearings of brush and red dirt, and they raid mud-brick hut villages for supplies and captives.

Even though they are less lethal than in the past, they have still carried out more than 160 attacks in the past vear, killing 14 and kidnapping 539, according to the LRA Crisis Tracker, a database maintained by a U.S. charity, Invisible Children.

"They're basically in survival mode," said Lt. Col. Matthew Maybouer, commander of U.S. special-operations forces in Central Africa. "The only way you're going to get this type of individual to come out is with a personalized

#### **Decades of violence**

The tactic, U.S. officers hope, will create a cascade of defections that will eliminate the rebel group before its infamous leader, Joseph Kony, has a chance to rebuild. The region remains beset by a toxic combination of armed groups, extreme poverty and governments that often barely control their own territory. U.S. military commanders want to promote stability where they can, and eliminating the threat from Mr.

Kony is at the top of their list. The rebel group has its roots in decades of ethnic conflict in rebel whisperer. Uganda. In the mid-1980s. Ugandan army soldiers, many from the Acholi ethnic group, massacred supporters of thenrebel Yoweri Museveni. The slaughter was particularly intense in an area called the Luwero Triangle northwest of Kampala, with the International Committee for the Red Cross putting the death toll at 300,000. In 1986, crews found thousands upon thousands of human skulls in the bush, cracked by machete blows and perforated by bullets.

After Mr. Museveni seized power—30 years on he remains Uganda's president—he used the Luwero killings to rally support for his rule. The Acholi began to worry the winners of the civil war would exact revenge on the losers.

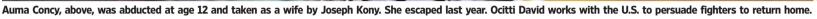
Mr. Kony, an Acholi who claimed spiritual powers, took up arms to try to oust Mr. Museveni and, he vowed, to rule the country according to the Ten Commandments. His brutality, however, quickly overshadowed his political and religious objectives. The Lord's Resistance Army marauded through villages, stealing children from their beds and dragging them back to the forest to serve as porters and fighters. Girls were forced into so-called bush marriages with senior rebels. Fighters cut the noses and lips off civilians; they lined oth-

ers up for roadside executions. Over 30 years, the group has killed some 17,000 people, and frightened millions into fleeing their homes, according to the U.S. military. In 2005, Mr. Kony and four lieutenants were indicted by the International Criminal Court in The Hague, charged with war crimes and crimes against humanity.

In 2011, then-President Barack Obama dispatched commandos from the Special Forces to help local armies kill

or capture Mr. Kony. Three of the five indicted rebel leaders have been killed,





according to the U.S. military. One, brigade commander Dominic Ongwen, surrendered and is on trial in The Hague, charged with 70 offenses including rape, pillage, torture and enslavement.

Mr. Kony himself, however, is still at large, hiding along the border between Sudan and South Sudan, according to the Ugandan military. He is the only remaining Ugandan member of the Lord's Resistance Army ineligible for Uganda's amnesty, according to the U.S. and Ugandan militaries.

While some Ugandans question whether rebel fighters should be forgiven their crimes, others support the amnesty program on the grounds that the fighters were often kidnapped as children and forced to carry out atrocities.

American commandos continue to advise an African Union task force as they hunt for Mr. Kony. But in a patch of Central Africa the size of California, finding remaining rebels is getting harder. These days, U.S.-advised troops only get into a firefight with the rebels every month or two.

So the Americans have turned to a more subtle effort to deprive Mr. Kony of his remaining followers, led by Eloise, a 29-year-old psychological-operations officer with a reputation as the U.S. Army's

American intelligence operatives debrief defectors, as they did with Mr. Obira in January, collecting information about the militants who remain. Soldiers believe they can now identify 80% by name.

they're missing," said Eloise.

pleted her second six-month tour of duty. At least 44 rebels defected during her time in the region, according to a military tally. Commanders hope the exodus will accelerate as each rebel concludes he doesn't want to be the last one fighting by Mr. Kony's side.

To make this happen, the U.S. psyop team depends heavily on a lanky Ugandan named Ocitti David.

Mr. Ocitti was 15 years old in 2002 when Lord's Resistance Army rebels descended on his village in Uganda. "If you move, we're going to shoot you," he remembers the rebels saving.

One rebel instructed him to point out his parents. "Who do

strings, let them know what The rebels made him a porter and tied to his back heavy This month, Eloise comsacks of sorghum, peanuts, salt and sugar stolen from villages. He saw children forced

> cided to risk an escape attempt. At 5 a.m., when the guards were drowsy, he and three other boys bolted into the forest. One was gunned down after a few hundred yards. Another injured himself and gave up. The third boy was shot by Ugandan troops hunting the rebels, Mr. Ocitti

> Mr. Ocitti fled through the bush for four days to reach his village in Uganda. When he got there, his mother was skittish, worrying he had brought Mr. Kony's men with him. He moved on his own to Gulu, a

> Now 30, Mr. Ocitti has formed a one-man charity, Pathways to Peace, which has located more than 30 families of Lord's Resistance Army fighters, a feat complicated by the fact that many rebels use noms de guerre.

> Early last month, Mr. Ocitti and the psyop team drove 90 minutes out of Gulu in search of relatives of a rebel named Ovoya James. The asphalt narrowed to a dirt road, which narrowed to a trail, wending its way through termite

> They found Mr. Ovoya's grandmother, Alur Pilimena, under a mango tree in Lamola village, rheumy-eyed and bent. Ms. Alur last saw her grandson in 1995, when rebel fighters grabbed the 15-vear-old on his way to work in a vegetable garden. He missed his father's death in 2002, and his mother's last year. He missed his sisters' weddings.

and engaged in small talk before getting to the point. "Toheard from those who defected recently that Ovoya James is still alive," he said.

Omona's young daughter posing with a picture of her father; Ms. Alur sat a moment in safety.

rebels sometimes send their own children out of hiding to

intelligence reports suggested,

were blocking a mass defection

by a rebel band some 30-

holdouts' families. "We would

play together, go swimming, go

fishing," Otika Thomas urged

his rebel brother in a recorded

message. "Please come back

and we'll live happily together

half a million leaflets over the

past six months. Mr. Kony, ac-

cording to defectors, tells his

followers the leaflets are poi-

sonous. He also warns them

that the Americans can spy on

allows the psyop team to put

rebels' actual family photos on

leaflets. Defectors sometimes

turn themselves in with leaf-

troops were especially keen to

draw out Omona Michael, Mr.

Kony's radio operator. Mr.

Omona had been abducted in

thousands of leaflets showing

Mr. Omona's uncle holding a

letter Mr. Omona had sent him

during a brief break in the

fighting 10 years ago. "Please

pray for me—I'm in a tight

spot," Mr. Omona had written

The Americans dropped

1994. at 13.

at the time.

Recently, special-operations

lets hidden in their pockets.

Mr. Ocitti's family-tracking

rebels through the leaflets.

In Central Africa, the psyop team estimates it has dropped

like we lived back then."

Mr. Ocitti tracked down the

strong.

The Americans recorded a message from an aunt, Alanyo Magret, who was a mother-figure to Mr. Omona. "Look, all of your friends are here," Ms. Alanyo said. "They're being well cared for, and others are in

Mr. Omona escaped during a patrol in January by pretending he had forgotten a list of needed supplies and had to return to camp, according to Lt. Col. Maybouer. His former comrades gave chase and shot at him. He made it to safety in Central African Republic after 11 days.

The former rebels' stories have been corroborated by the U.S. military and Mr. Ocitti, but it isn't possible to verify all of the details of their escapes.

Eloise aims for the rebels' weak spots. During the dry season, when food is scarce in the forest, the Americans carpeted the bush with leaflets showing a well-known defector enjoying a Margherita pizza. "Hungry?" the leaflet read.

#### Took off at a run

While in the bush, Kidega Peter, a Lord's Resistance Army machine-gunner, picked up a leaflet with the words "We Are Free" written across the top. The photo showed six men laughing together. Four were Mr. Kony's personal bodyguards, who had escaped in 2015. One man had defected in 2014 and the last one in 2016-Eloise's effort to show wouldbe defectors they would be safe

back home. Mr. Kidega glanced quickly at the map on the back, with safe defection sites marked, then dropped the leaflet on the ground to avoid notice by his

fellow rebels. Lord's Resistance Army fighters had yanked Mr. Kidega from his family compound in 2003. He had risen to the rank of sergeant and led 10 other fighters in the group traveling with Mr. Kony himself.

When I saw that leaflet, I realized the propaganda Kony had been feeding us—that we'd be killed-was a lie," Mr. Kidega said later.

One night in November, he waited until the guards at his camp grew groggy on a local brew of yeast, sesame, honey and peanuts. Then he and five others took off at a run.

The following day, a rebel pursuit party shot and killed two of the escapees. One of the group who successfully made it home was Auma Concy, one of the many women Mr. Kony had kidnapped and taken as a wife. She had been abducted at age 12 and had spent half her life a captive.

During the escape Mr. Kidega found himself separated from the others and walked alone four days to a trading post. The locals there grew suspicious of him, and he walked four more days to another town, where the Ugandan military picked him up and delivered him to the American Special Forces team in Obo, Central African Republic.

Years earlier, Mr. Kidega's relatives had buried another Another photo showed Mr. man in the family compound in Uganda, believing the body to

Last month, Mr. Ocitti escorted Mr. Kidega home, villagers swarming the car and ululating joyously as they approached.

Mr. Kidega stepped on an egg, a traditional Acholi cleansing ceremony. At the door of a hut, a family elder gently washed Mr. Kidega's face, symbolically wiping away the tears shed over his abduction.





Top, U.S. military psyop specialists hurl personalized leaflets, such as the one above, from a plane to urge rebels to return home.

### up Mr. Ovoya's sisters and record a helicopter message on Mr. Ocitti's next visit. Eloise "gives me the names," Mr. Ocitti said. "I give to kill other children. Abducther the voices." ees could be executed for merely making eye contact 'Before I die' with a friend. In one recording, an old

After six months, he deman asked his rebel son to come home to dig the father's grave, a filial duty held sacred by the Acholi. "I want you to come find me, pay your last respects and receive my blessings before I die," the father said. The psyop team also aimed messages at two fighters who,

larger town.

mounds and cassava fields.

Mr. Ocitti knew his revela-

tion would be hard to absorb day I'm here because we have

stunned silence. "We prayed and prayed and prayed," she said. "Finally we gave up praying for him. Now we can hope again." "The only way to encourage

him to come out is if you send him a message," Mr. Ocitti told Ms. Alur agreed to round come home."

school. It's time for you to

# Leak Probe Tightens on CIA Team Bharara's

Digital trail points investigators to contractors who worked on software

By Shane Harris AND ROBERT McMILLAN

Investigators probing who may have provided WikiLeaks with classified information about the Central Intelligence Agency's purported computerhacking techniques are zeroing in on a small number of contractors who have worked for the agency and may have been disgruntled over recent job losses, according to people familiar with the investigation.

Authorities on Thursday questioned a handful of contractors working in at least two locations in the Virginia suburbs of Washington, D.C., these people said. Law-enforcement officials said no arrests had been made, but one person familiar with the investigation said it was "rapidly unfolding."

This person added that a digital trail has pointed authorities, at least initially, to a team of software developers working with the CIA's Engineering Development Group. The group designs tools that, according to the documents released by WikiLeaks, the CIA uses to break into smartphones, personal computers and televisions connected to the internet. The more than 8,000 pages of documents that WikiLeaks disclosed appear to have been gence community depends on grant of asylum. Current and suspected of taking to his taken last December from a server that the Engineering Development Group uses, this person said, and that "only a few contractors would have ac-

More than a dozen companies work for the CIA on hacking projects, the bulk of them at a facility near Chantilly, Va. It wasn't clear which companies the people who were questioned worked for. In recent months, there has been talk of "bad blood" in the small world of CIA contractors who are vital to the agency's hacking projects, the people familiar with the probe said. One group of contractors recently had been working for the CIA overseas and expected to be given new jobs with the agency in the U.S., but their positions were later eliminated, one person said.

"There were definitely disgruntled people internally," this person said, adding that he believes these individuals may have been among those questioned by investigators.

The CIA hasn't confirmed whether the documents that WikiLeaks posted to its website are authentic. A spokesman for the agency declined to com-

If CIA contractors ultimately are found to have been responsible for the massive leak, it will be the third disclosure of intelligence secrets in the past four years attributed to the hired experts that the intelli-

to fill all kinds of sensitive jobs, from technology support for espionage programs to the design and testing of hacking

One source familiar with the investigation said the people who have been questioned so far all have top-secret level security clearances and recently passed polygraph examinations. But prior leakers had former intelligence officials have said Mr. Snowden's leaks caused the NSA to suspend many intelligence-gathering operations and gave terrorists and spies clues into how the U.S. monitors global communi-

And this year, Harold "Hal" Martin III, also a former NSA contractor, was indicted on a charge of removing a huge



More than a dozen firms work for the CIA on hacking projects.

also been investigated and deemed trustworthy enough to work in some of the government's most sensitive intelligence organizations.

In 2013, National Security Agency contractor Edward Snowden disclosed classified information about surveillance programs and the agency's relationship with major technology companies. U.S. prosecutors have charged him under the Espionage Act, and he is now living in Russia under a

amount of classified material from the agency's headquarters at Fort Meade, Md. Mr. Martin has pleaded not guilty. A group that calls itself Shadow Brokers claims to have some of the same information that Mr. Martin allegedly took and has tried to auction the material online.

One person with direct knowledge of the investigation of Mr. Martin said it still isn't clear how the information, which the former contractor is home in suburban Maryland, ended up in others' hands. But the volume of information is staggering—far more than what Mr. Snowden disclosedand more sensitive because it pertains to the NSA's own hacking operations by its elite Tailored Access Operations unit, this person said.

The WikiLeaks disclosure has put the White House in the awkward position of criticizing a group that President Donald Trump praised on the campaign trail.

WikiLeaks," Mr. "I love Trump told supporters at a campaign rally in Pennsylvania last October, after the group began publishing emails stolen from Hillary Clinton's campaign chairman, John Podesta. Some of those emails described paid speeches that Mrs. Clinton gave to financial-services firms.

But White House spokesman Sean Spicer last week struck a far different tone, blasting the antisecrecy group for damaging U.S. national security.

On Thursday, WikiLeaks founder Julian Assange offered to give companies the technical details of how the CIA has apparently hacked their products. Mr. Spicer suggested that companies who took up Mr. Assange on his offer could be breaking the law if they received classified information and advised that the firms consult the Justice Department.

—Aruna Viswanatha contributed to this article.

### Term **Ends** In Firing

By Erica Orden AND NICOLE HONG

WASHINGTON—The sudden departure of Preet Bharara, the top federal prosecutor in Manhattan, sent shock waves through New York City's legal, law-enforcement and political circles, where Mr. Bharara has been an influential figure over the past eight years with a host of high-profile prosecutions.

Mr. Bharara said Saturday he was fired from his position as the Manhattan U.S. attorney, after he defied a request by the Justice Department for the remaining U.S. attorneys appointed by former President Barack Obama to resign.

A Justice Department spokeswoman confirmed that Mr. Bharara is no longer the Manhattan U.S. attorney.

Attorney General Jeff Sessions on Friday asked the 46 remaining U.S. attorneys appointed by Mr. Obama to step down. Mr. Bharara, who had served as Manhattan U.S. attorney since 2009, refused to do so, which led to his firing.

Although it isn't uncommon for a new administration to replace the U.S. attorneys appointed by the previous administration, Friday's request was surprising for Mr. Bharara. In November, President Donald Trump met with him in Trump Tower and asked him to stay in his current position, Mr. Bharara told reporters at

The White House and the Justice Department didn't make any public statements about the matter then.

Mr. Bharara's ouster comes as Mr. Trump and his top aides believe they are being undermined by Obama holdovers in sensitive positions throughout the executive branch. White House officials have moved in recent weeks to quash leaks and ensure that loyalists occupy key positions at sub-cabinet levels.

A White House spokesman didn't immediately respond to requests for comment.

The call for Mr. Bharara's resignation, and his refusal, represented a remarkable clash at the highest levels of the federal government that people familiar with the Justice Department's procedures

say was unprecedented.

In a statement Friday, Senate Minority Leader Chuck Schumer (D., N.Y.) said Mr. Trump had assured him in November that he wanted Mr. Bharara to continue as Manhattan U.S. attorney.



**Preet Bharara** 

Mr. Bharara's departure ends his eight-year tenure as perhaps the most recognizable U.S. attorney in the country. Since 2009, he has led the Southern District of New York, an office of federal prosecutors that has brought highprofile cases against Wall Street fraudsters, corrupt politicians, international terrorists and overseas cybercriminals.

After the financial crisis, Mr. Bharara became particularly well known for his insider-trading cases. His office secured about 80 insider-trading convictions in recent vears, including against hedge funds like billionaire Steven A. Cohen's former SAC Capital Advisors LP.

Mr. Bharara leaves behind much unfinished business, especially in public corruption. Last fall, Mr. Bharara charged nine people, including a former top aide to Democratic Gov. Andrew Cuomo, in two bribery, bid-rigging and extortion schemes. That case is expected to go to trial in the

## U.S. Could Share Hacking Tools With Firms

BY ROBERT McMILLAN

WikiLeaks has offered to give technology companies technical information on U.S. government hacking tools that target their products.

But there is already a federal program designed to do

The Vulnerability Equities Process was established by the Obama administration as a way for the government to share cybersecurity flaws that intelligence agencies discover in commercial products to help companies protect their customers and businesses.

Michael Daniel, who until January chaired the Executive Review Board, which oversees the process, said the government has the ability to release details on computer security flaws to relevant tech companies within "a matter of days." If the hacking tools described in the leaked documents are from the Central Intelligence Agency, as WikiLeaks claims, ≦ some security experts believe that this could very well hap-

The technical details are important to tech companies such as **Apple** Inc., **Microsoft** Corp. and **Alphabet** Inc.'s Google. Since WikiLeaks' release Tuesday of the nearly 9,000 documents it says came from the Central Intelligence Agency, which described tools for hacking a range of software, smartphones and other products, companies have been trying to determine what vulnerabilities described in the documents still exist and how to fix them. The technical information is vital for ensuring that process is effective, cybersecurity specialists say.

But it isn't clear whether the government in this case will use the Vulnerability Equities Process, known as VEP-or indeed whether the public would know if it has. It is even possible the government already has selectively disclosed some of



Apple Chief Executive Tim Cook, at the introduction of the iPhone 7 in September. The tech company says it has already fixed many flaws.

the security bugs described in the WikiLeaks documents.

White House representatives didn't respond to requests seeking comment Friday.

Many of the details of the VEP are classified. Mr. Daniel, for example, couldn't say how many bugs were reported through the process during his tenure or whether any were provided by the CIA. He said when the government has used the VEP to provide U.S. companies with data on their vulnerabilities, it generally has involved no fanfare.

The VEP has been under development since 2008, but its profile rose in 2014, when the White House said the government would be "biased toward responsibly disclosing" computer bugs rather than hoarding them in stockpiles of cyberweapons. Led by the National Security Council, the VEP entails a review board that includes representatives from agencies such as the Department of Homeland Security, the Federal Bureau of Investigation, the National Security Agency and the CIA.

Several major companies, including Google, have said they believe software updates made before WikiLeaks release already protect users from many of the attacks the documents describe. But until the actual tools are made public, security experts say, it is impossible to say whether users are completely protected.

For example, one Apple iOS attack described in the WikiLeaks document, called "Saline" could potentially be used by hackers to run unauthorized software on an iPhone, said Rich Mogull, an analyst at research and consulting firm Securosis. According to the WikiLeaks documentation, the bug affects somewhat recent versions of Apple's iOS operating system, although it isn't clear whether it would work on the latest release of iOS.

An Apple spokesman said many of the issues described in the WikiLeaks documents have already been patched and the company will "continue work to rapidly address any identified vulnerabilities."

The tech companies curface a dilemma. rently WikiLeaks founder Julian Assange on Thursday offered to share with them the technical details on the hacking tools described in the purported CIA documents. Since the information, if valid, are classified, that raises thorny legal and ethical issues, however, and there is no evidence that big companies have accepted Mr. Assange's offer.

WikiLeaks didn't respond to

messages seeking comment. Apple and Google declined to comment on the group. Microsoft said that as of Friday neither Mr. Assange nor his organization had contacted it.

the same WikiLeaks has threatened to release more information from the CIA files, and the companies don't want the technical information put out publicly.

"I do not know what the resolution to this event will be," said Dan Guido, director at hack/secure, a cybersecurity investment firm. "Nobody knows what Julian Assange is going to do and there's a lot of anxiety about how the government will respond," given the Trump administration's evolving relationship with technology companies, Mr. Guido

-Tripp Mickle, Jay Greene and Jack Nicas contributed to this article.

#### U.S. WATCH

WHITE HOUSE

#### **Intruder Arrested After Scaling Fence**

An intruder was arrested Friday night after scaling a fence protecting the White House, the U.S. Secret Service said.

The incident happened at 11:38 p.m., the agency said, when the intruder breached the "outer perimeter fence" near the U.S. Treasury Building and East Exec-

President Donald Trump was at home at the time.

A Secret Service officer was standing guard on the South grounds of the White House when he saw the suspect, Jonathan Tran, approach, according to an incident report and information from Washington, D.C., police.

Mr. Tran was carrying a backpack that was found not to contain any hazardous material, the Secret Service said. It couldn't immediately be determined whether Mr. Tran had a lawyer. After a search of the White House grounds, "nothing of concern to security operations was found," the Secret Service said.

#### Gerrymandering Found in 3 Districts

–Peter Nicholas

Federal judges found more

problems in Texas' voting-rights laws, ruling that Republicans racially gerrymandered some congressional districts to weaken the growing electoral power of minorities.

The ruling late Friday by a three-judge panel in San Antonio gave Democrats hope of new, more favorably drawn maps that could turn over more seats in Congress in 2018. But the judges in their 2-1 decision didn't propose an immediate fix, and Texas could appeal to the U.S. Supreme Court.

Republicans hold two of three congressional districts that were ruled newly invalid and found to have been partly drawn with discriminatory intent.

The GOP-controlled Texas Legislature approved the maps in 2011, the same year then-Gov. Rick Perry signed a voter ID law that ranks among the toughest in the U.S. Courts have since weakened that law, too. Republican Texas Attorney

General Ken Paxton didn't immediately remark on the ruling.

-Associated Press

ALASKA

#### **Father, Son Battle** For Lead in Iditarod

A father and son are battling for the lead in Alaska's Iditarod Trail Sled Dog Race.

Mitch Seavey, a two-time Idi-

tarod champion, was the first musher out of the checkpoint in the village of Kaltag on Sunday, departing at 4:40 a.m. His son, current Iditarod champ Dallas Seavey, left five minutes later. The father and son are close.

but also competitive. Dallas Seavey has won four of the past five races. Mitch Seavey finished in second place behind his son the past two years.

The Iditarod crosses nearly 1,000 miles of grueling Alaska wilderness. This year's race started March 6 in Fairbanks.

The winner is expected early this week in the town of Nome. along Alaska's frozen Bering Sea

—Associated Press | coming months.

# LIFESARTS

# Fashion's Secret Social Media Weapon

New studies of the tweeting and posting from fashion shows finds 'Instagirls' have more impact than celebrities in the front row



BY RAY A. SMITH

THE SOCIAL MEDIA posts generating the most buzz for designers at fashion shows often come from the models themselves, not the glamorous guests watching them strut by.

Models with large social-media followings can significantly boost the number of likes and comments that a high-profile fashion show generates on apps like Instagram and Twitter, according to a new study by Launchmetrics, a New York-based technology and data analytics company. These so-called "social-media models" can generate more buzz for a show than celebrities sitting in the front row.

The analysis comes as another month of women's fashion shows spanning four cities concluded last week in Paris. Designers and fashion executives continue to debate whether shows are worth the expense. The average cost of a show is \$500,000, said Micheal Jais, chief executive and co-founder of Launchmetrics. And many brands pay celebrities to sit in the front row, covering their airfare, transportation and hotel costs.

There has been increasing criticism by big American designers. including Ralph Lauren, of the tradition of showing clothes on the runway that won't be available in stores for months, prompting Mr. Lauren and others to experiment with see-now/buy-now shows



A number of designers have exper-

imented with different formats to

showcase their work, including us-

ing videos, art installations and

dances. Some mount elaborate

spectacles that will be Instagram

catnip to combat fashion fatigue.

Fashion brands often nudge

guests to promote their shows on

social media, encouraging them to

use hashtags they provide and free

Wi-Fi. For most shows, however,

on average only 22% of invitees

are active on social media before,

during, or after the show, accord-

Models—historically paid to be

seen and not heard—have become

loud voices on social media over

ing to Launchmetrics.

careers. More designer brands and casting agents factor in a model's social media following as criteria when creating shows or campaigns. The brands and magazines pay to associate themselves with them in the hopes followers will become fans of the brand.

Models regularly take followers with them from show to show, chronicling their commutes, their hair and makeup preparation sessions, and giving hints of what they'll be wearing down the runway, giving fans an insider's view. In some cases models are encouraged by brands or their agents or paid to post, but their social media activity

is often a model's own impulse. "The audience wants to be be-



hind the scenes," said Mr. Jais of Launchmetrics recently worked

on an analysis for the Alexander Wang label to measure how much exposure it got for its Spring 2017 runway show, held in September of 2016. The company compared those results with analyses of a number of big New York Fashion Week shows during that season, using the Marc Jacobs show—one of the week's buzziest—as a benchmark.

The company tracked all the blog, Instagram, Facebook, and Twitter activity generated by attendees, during and after the shows as well as articles published. It added to that activity by models and others at the show, such as publicists or hair and makeup artists. A proprietary algorithm was then applied to quantify the reach, engagement and the circulation of those posts.

Launchmetrics found that the Marc Jacobs show generated three times more likes and comments on social media than other brands in its peer group. Most of that traffic came from models who posted photos from backstage after or before the show or reposted pictures of themselves taken by others.

The show included Kendall Jenner, kin to the popular Kardashian sisters, as well as sisters Bella and Gigi Hadid, who both have large social-media followings. Ms. Jenner posted a video about the show that got 7.3 million views. Ms. Hadid posted a picture after the show with the caption post Marc" that got 1.1 million likes. Ms. Jenner is the top "social" model, according to Models.com, which tracks models' careers and ranks them in categories, with nearly 112.6 million followers across Instagram, Twitter and Facebook.

Alexander Wang wasn't available to comment, the company said. A representative from Marc Jacobs declined to comment because officials hadn't seen the full analysis.



TRICKS OF THE TRADE | Cheryl Lu-Lien Tan

### SECRETS TO PUTTING YOUR BEST FACE FORWARD



**TAKING CARE** of your skin is particularly important while on the road, where irregular sleep and meals can take a toll on your appearance.

Gustaf Törling, vice president and global creative director at Origins, a skin-care line, travels often for business, with some trips stretching up to two weeks. "I basically never unpack my bags," says Mr. Törling, who grew up in Sweden and is based in New York. "Men tend to get a little

lazy when it comes to skin care," he says, but travel is no excuse to stop cleaning and moisturizing, especially if you have business meetings lined up.

Mr. Törling skips hotel lotions and moisturizers, preferring to bring along his own products. For starters, he washes his face with a cleanser that contains kelp extract. wheat protein and tourmaline. which help lessen oil production. Then he tries to "calm down" his skin with a moisturizer and a toner that contain reishi mushroom extract, which he says helps reduce redness and inflammation in the skin from daily stresses. "I have a two-year-old daughter," he says. "I



Origins executive Gustaf Törling, left, and the skin-care products that he packs when traveling.

don't sleep a lot."

good," he says.

Mr. Törling is partial to serums and says applying one after cleansing makes his skin "look fresher tracts from anogeissus, a Ghanaian tree, which also has an anti-inflam-

and better." He likes one with exmatory effect. Among his travel essentials is a ginseng mist he spritzes on his face during flights. "It freshens my

skin when I'm on the plane for 16

hours. It's energizing and it makes

your skin look and feel really

away for longer than a week or traveling to a city with polluted air, he brings a facial mask that also contains reishi mushroom extract, to use as a cleanser. "Eating well and sleep-

If Mr. Törling is going

ing-that's number one," he

"When I'm in New York, I take care of myself, I eat well. But when I travel I do eat worse," Mr. Törling says. On trips, "I try to drink three liters of water a day," he says. "And if I need to snack, I try to snack on fruit. Anything that's not fries and candy, basically."

To make sure that he sleeps enough, Mr. Törling takes naps if he feels tired. "Just 20 minutes between meetings or before you go out to dinner. It helps so much," he says.

Weather also is a consideration. "Sweden in the summer is bright almost 24 hours a day," he says, so he packs moisturizer with SPF of at least 45. Many moisturizers have SPFs of about 25, he says.

After all that, if your skin breaks out on the road, Mr. Törling has an unusual tip: Try putting a few Clear Eyes eye drops on the spot.

### Masters Across the Decades

An exhibition reveals how Richard Diebenkorn paid homage to and drew inspiration from the French pioneer

BY JUDITH H. DOBRZYNSKI

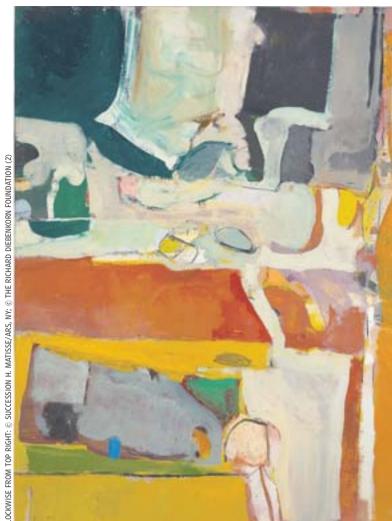
San Francisco **RARELY**—if ever—in the history of modern art has a renowned artist been as deeply and openly inspired by another artist as Richard Diebenkorn was by Henri Matisse. He first encountered a Matisse painting in 1943, as an art student at Stanford. Ever after, Matisse's works—which Diebenkorn sought out on his travels and studied in his vast collection of publications about him-percolated in his mind. Again and again, Diebenkorn (1922-1993) would create drawings and paintings whose structure, palette, light, fluidity and sense of place profoundly embraced Ma-

Always, though, "he was able to make them new," as scholar John Elderfield writes in the catalog for "Matisse/Diebenkorn," a stunningly beautiful display here at the San Francisco Museum of Modern Art.

The exhibition brings to life a relationship that has been much discussed but never so thoroughly explored. By interspersing 40 paintings and drawings by Matisse with 60 by Diebenkorn, it captures the artistic journey Diebenkorn began in earnest 10 years after that fateful day in 1943, and one year after he visited a major Matisse exhibition in Los Angeles.

Diebenkorn was teaching in Illinois in 1953. Uninspired by his surroundings, he drew on his reservoir of Matisse images, giving the abstract works he had been painting brighter colors and more defined structures.

In "Urbana #4" (1953), he channeled Matisse's "Studio, Quai Saint-Michel" (1916), painting blocks of red, yellow and blue that echo the geometry of the Matisse. In "Urbana #5 (Beach Town)" (1953), his abstract shapes are rooted in Matisse's "Interior at Nice" (1919), a painting that also led Diebenkorn to mix interior and exterior spaces and to play with perspective. In "Urbana #6 (1953), he adopts the structure of Matisse's "Goldfish and Palette" (1914). And he begins to drop stripes, dots and other bits recalling Matisse's highly decorative (and gorgeous) textile and wallpaper patterns into his works-



but sparingly.

By 1955, a restless Diebenkorn had turned away from abstraction (which then dominated American art) and begun painting brilliantly colored, luscious streetscapes, still lifes and figurative works. The rich array here—"Still Life With Orange Peel" (1955), "Cityscape #1" (1963) and "Sleeping Woman" (1961) are among the best-allows comparing and contrasting with Matisse's "Fruit Dish" (1902-3), "Notre Dame, a Late Afternoon" (1902) and "The Blue Eyes" (1935). They reveal the difference between "twins," or copies, which these are not, and inspirations.

About two-thirds in, visitors come upon "Recollections of a Visit to Leningrad" (1965), a highlight that is among Diebenkorn's

most overt homages to Matisse. He painted it soon after returning from a cultural exchange to the U.S.S.R., where he had spent hours studying the Matisse works amassed by famed collectors Sergei Shchukin and Ivan Morozov. "Recollections" blends arabesques like those in Matisse's masterpiece "Red Room (Harmony in Red)" (1908), bought by Shchukin but not on view here, with a spare, flattened landscape, in bright blues and greens, seen through a window, updating a recurring practice of Matisse.

Now Diebenkorn was ready to move on again. Late in the 1960s, after he moved to Southern California, he returned to abstraction, beginning his Ocean Park seriesflat, colorful, geometric abstrac-



Clockwise from above: Matisse's 'Studio, Quai Saint-Michel' (1916); Diebenkorn's 'Ocean Park #6' (1968); and his 'Urbana #4' (1953)



tions that evoke the Pacific coast.

Yet they, too, link to Matisse. In one very revealing sequence, Matisse's bold "Nude With a White Scarf" (1909) hangs not far from his abstracted "Seated Pink Nude" (1935). Between them is Diebenkorn's "Ocean Park #6" (1968), an abstract work that bears traces of bodies and draws especially on "Seated Pink Nude."

Two more radical Matisse works, both from 1914, were even more crucial to Diebenkorn. "View of Notre Dame" shows only the bare outlines of the cathedral through a

window, its surroundings delineated sketchily. "French Window at Collioure" strips down the view even moreshowing only blocks of color with no detail.

Diebenkorn proceeded to create shimmering, luminous largescale abstractions, in soft shades of colorblues, pinks, greens, purples and golds. Structurally related to Matisse paintings, these works-such as the brilliant "Ocean Park #54" (1972), "Ocean Park #79 (1975) and "Ocean Park #122" (1980)—are atmospheric paintings of light, land, air and wa-

Diebenkorn had changed dramatically. No longer making the energy-filled abstrac-

tions of his youth, or the sumptuous figurative works of his middle years, he had evolved into a painter of quiet, peaceful, thought-

I first saw a slightly smaller but equally dazzling version of this exhibition last fall at the Baltimore Museum of Art, where the artworks had been hung in a somewhat different order. Strikingly, each juxtaposition there also made perfect sense. In "Matisse/Diebenkorn," curators Katherine Rothkopf in Baltimore and Janet Bishop in San Francisco have definitively illustrated just how deeply Diebenkorn internalized the art of Matisse.

Diebenkorn, it should be noted, also drew inspiration from artists like Cézanne, Mondrian, Bonnard and Hopper-along with Indian miniatures, which he collected. But as shown here, Matisse was his North Star, ever present, ever shining.

#### Matisse/Diebenkorn

San Francisco Museum of Modern Art, through May 29

Ms. Dobrzynski writes about culture for many publications and blogs at www.artsjournal.com/ realcleararts.

**WEEKEND CONFIDENTIAL:** Alexandra Wolfe

# TI I7ARRA

**JOSEPH** Altuzarra wants to dress women, not girls. The 33-year-old designer's muse, he says, is "someone who has a real life." He has become known for fashion that is

both distinctly feminine and practical. For example, some of his dresses have back zippers with long handles, to make it easier for a woman to reach and pull—no need to ask for help when getting dressed. His spring readyto-wear collection features outfits with thoughtfully designed pockets and comfortable fabrics, such as stretch knits in form-fitting shapes. (Items include a \$600 off-theshoulder rib-knit top and a \$2,800 trench

But it isn't all about function. His fall 2017 ready-to-wear line, which he just showed at New York Fashion Week, was inspired by Northern Renaissance paintings and includes coats with ornate closures, plenty of velvet and rich colors. He calls it an ode to order and empowerment.

Mr. Altuzarra, who started his label almost nine years ago, has become a force in the luxury fashion business himself. "He's one of the brightest stars coming out of New York at the moment," says Neiman Marcus fashion director Ken Downing. "Joseph has staying power." In 2014, he won the Council of Fashion Designers of America's Womenswear Designer of the Year, beating more established names such as Marc Jacobs and Alexander Wang. His line is now sold in high-end stores like Nordstrom and Barneys in 16 states and 31 countries. "He has the ability to really speak to the moment...he has a razor-sharp point of view,' adds Mr. Downing.

Four years ago, the luxury conglomerate Kering (owner of Gucci, Balenciaga, Puma and other retail brands) made a minority investment in his company. At the time, the Altuzarra brand's annual revenues were \$10 million. (The label, which now has about 30 employees, won't release more recent sales figures.) Across the industry, global luxury ready-to-wear apparel and footwear sales reached \$121.9 billion in 2016, up 3.9% from 2015, according to consulting firm Euromonitor International.

Mr. Altuzarra grew up in Paris, the son of a

Chinese-American mother and a French father. both of them bankers. Even as a child, he liked to draw pictures of clothes.

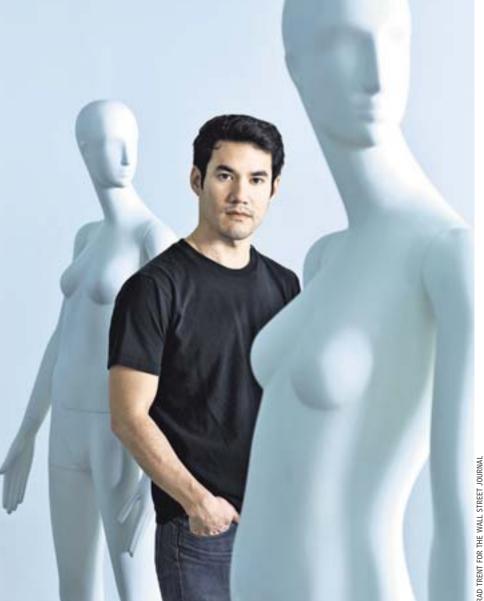
After graduating with a degree in art history from Swarthmore College, he went into fashion, working for brands including Marc Jacobs, Proenza Schouler and Givenchy. His parents weren't thrilled at first. "I think especially when you work in business...fashion can seem very frivolous," he says. "It doesn't seem like a serious profession, and it also seems like a pretty unhealthy lifestyle." Still, it could have been worse, as far as his parents were concerned—he had also studied ballet when he was young and had wanted to be a dancer. "Anything but ballet," he says with a laugh. His mother, Karen, is now chairman of Altuzarra's board.

His parents are "both very humble, very hardworking people," he says—and he's grateful for that. His business is "a fairly showy. materialistic industry," he says, "but I actually think growing up with them as parents is...a side of me that keeps me grounded."

His clothing has recently attracted the likes of actress Evan Rachel Wood, who wore one of his midnight blue velvet suits on the red carpet at this year's Screen Actors Guild Awards. Michelle Obama and Kate Middleton were also spotted in his dresses last year. Mr. Altuzarra doesn't pay celebrities to wear his clothing as some brands do. "I don't love celebrities or hanging out with celebrities," he says. "I'm not doing this because I want to be

Still, sites like Instagram, Twitter and Facebook have made the job of a fashion designer more of a public role. "It used to be that you just had to design clothes, and then it became design clothes and also build relationships with clients, and now it's design clothes, build relationships with clients and be a spokesperson for your brand."

When it comes to his clothes, Mr. Altuzarra thinks a lot about comfort and wearability. It comes from his upbringing, he says. "There is a very French side to the brand, which is more sophisticated and very tailored," he says, with a dose of seduction added in. "Then on the flip side, there is the very American, prag-



The 33-year-old fashion designer's clothes mix French tailoring with American practicality.

matic side, which is a lot about comfort and thinking about things like wrinkle-free fabrics" for women who travel a lot and don't want to look rumpled after a flight. He surveys his staff and customers to ask what women need. A recent response: more pockets and closures, and more suits with stretch.

Mr. Altuzarra lives with his husband, realestate developer Seth Weissman, in New York City. He doesn't wade too deeply into politics, although he does think about how to respond in his designs to the national mood. He con-

siders the lighthearted prints of his spring

ons and berries—a respite from the heated

collection-with cherries, lemons, watermel-

political climate.

Though some designers, including Marc Jacobs, Tom Ford and Derek Lam, have publicly said that they wouldn't want to work with Melania Trump, the first lady, Mr. Altuzarra says that he wouldn't rule it out. He disagrees with the idea of refusing to work with someone based on their political beliefs.

One product he won't do is hoodies. "The person who is wearing a hoodie...probably is already buying their hoodie somewhere, and that designer is doing it a lot better than I would be doing it," he says. "I think in this industry you have to really know who you are and what your guardrails are."

BRAD TRENT FOR THE WALL STREET JOURNAL

#### REVIEW & OUTLOOK

### How to Think About the Trade Deficit

Peter Navarro is

wrong about the U.S.

balance of payments.

resident Trump's chief trade adviser, Peter Navarro, recently argued on these pages that trade deficits are so economi-

cally harmful that U.S. policy should seek to eliminate them. This bad idea has been gaining adherents, so perhaps it's time for a tutorial on trade and the wealth of nations.

Americans may be alarmed

when they hear that the U.S. buys more from the rest of the world than it sells because they can't run a household deficit. But national accounting isn't the same as household accounting, and a trade deficit isn't a debt that must be repaid. It is often a sign of economic prosperity.

Start by keeping in mind the basic formula embedded into the national balance of payments: A trade deficit equals a capital surplus. The trade deficit is part of the "current account" and it means that Americans are importing more merchandise and services than they export. On the other side of the ledger is the "capital account," which records capital inflows. When the U.S. has a current-account deficit it has to have a capitalaccount surplus of the same amount.

This is not by choice or speculation. It happens by definition because for every buyer there must be a seller, as these columns have written for 125 years. The national payments must balance.

The capital-account surplus arises, in part, because in selling oil, televisions, jewelry, cars, steel and clothing to Americans, foreigners get dollars in return. Mexicans and Chinese could wallpaper their dining rooms with Georges and Benjamins. But it is more common to put the money in dollar-denominated assets like real estate, stocks, debt or dollar bank accounts.

Eliminating a current-account deficit isn't as easy as it sounds because it is often the byproduct of a healthy economy. It means the purchasing power of the currency is strong, and consumers are rich and optimistic enough to spend. The opposite is also true: Countries in recession after a devaluation tend to have trade surpluses as the unemployed are forced to tighten their belts and even those working cannot afford imports.

If trade surpluses were a sign of success, the 1930s might have been different in the U.S. As George Mason economist Don Boudreaux points out on his Cafe Hayek blog, "For only 18 of the 120 months of that dreary decade did the United States run a trade deficit. For each of the remaining 102 months of the decade of the 1930s the U.S. ran a trade surplus.'

On the other hand, the U.S. ran a trade deficit

in nearly every year of its rapidly growing first century and all through the prosperous 1980s and 1990s.

> Mr. Navarro understands this enough that he also warns about the capital surplus—to wit, that much of it goes to finance an investment shortfall in the U.S., especially government borrowing. Yet Ameri-

cans are making millions of individual decisions about how much to save, and foreigners are not forcing Washington to borrow. If government weren't gobbling up that capital, more of it would go into the private economy.

Yet much of this foreign capital does go to finance mortgages and consumer loans, which help the U.S. standard of living. And much is invested in land, plants and equipment and financial assets, none of which needs to be repaid and all of which can make the U.S. economy and exports more globally competitive. If Mr. Trump delivers on his promise to cut taxes, investing in the U.S. will be even more attractive.

The "economic nationalists" fret about foreigners buying U.S. property, but that hardly jeopardizes U.S. sovereignty. The U.S. capital stock isn't a fixed amount and adding to what is here doesn't diminish U.S. ownership. It does, however, allow current owners to cash out of their property and put that money to other uses. The owner of a bricks-and-mortar business might sell and invest in a tech startup. Restricting foreign ownership would reduce demand to hold U.S. assets, hardly a way to make America great again.

Perhaps the best way to think about the U.S. trade deficit is not to think about it. Way back in 1978 a group of economic eminences tasked with looking at the U.S. balance of payments noted that "the words 'surplus' and 'deficit' should be avoided insofar as possible." They added that "these words are frequently taken to mean that the developments are 'good' or 'bad' respectively," but "that interpretation is often incorrect."

An earlier Review Committee for Balance of Payments Statistics in 1965 warned that "No single number can adequately describe the international position of the United States during any given period." Perhaps it's time for another such committee to clarify this debate.

Short of that, the Trump Administration should focus on policies that restore the economy to its 3% annual growth historical trend. If growth is fast enough, and incomes are rising, no one will care about the trade deficit.

### Omens of Higher U.S. Wages

riday's official February payroll report of 235,000 net new U.S. jobs didn't match the private ADP report of 298.000 from midweek, but it was still a healthy fillip that beat the expectations of most economists. Even better is the report's harbinger of tighter labor markets and wage increases if Congress can implement President Trump's tax, energy and deregulation agenda.

The notable news is that the civilian workforce grew by 340,000 and the total number of employed by 447,000. The labor participation rate ticked up to 63%. One month does not make a trend, but the labor market may now be tight enough in much of the country that it is starting to coax workers who have been on the sidelines back into the job market.

Modest good news was the 0.2% boost in average hourly earnings for the month, or 2.8% year over year. Those aren't gangbuster numbers, but year-over-year increases have been creeping up. That gives consumers more confidence to spend.

The labor-market increase and modest wage growth suggest that the economic expansion still has room to run despite being in its seventh year. This is long by historical standards but it may be that many years of 2% growth mean that there's still room to expand employment without beginning a wage-driven inflation cycle.

This is not to say that the Federal Reserve should refrain from raising interest rates at this week's Open Market Committee meeting. The Fed is falling behind the curve of its own labormarket measures for monetary tightening That's especially true if Republicans succeed in implementing their pro-growth economic agenda. The Fed's models give little credence to the growth effects from tax reform and deregulation, which contributed to Alan Greenspan's mistake in not tightening for a year after the tax cut of 2003 became law.

The key to lifting wages is faster growth from the Obama 2% doldrums. After years of prioritizing income redistribution over growth, better policies could pay off for workers.

### South Korea's Next President

The rule of law prevails

in Seoul, even as

strategic threats mount.

**▼** outh Korea's Constitutional Court unanimously decided Friday to remove President Park Geun-hye from office. Her suc-

cessor, who must be elected in the next 60 days, will likely come from the left-of-center Democratic Party. That raises important policy questions for Seoul, both domestic and international, but it is also an

important reminder of the strength of the South's democratic institutions.

Ms. Park's dramatic downfall began in October, following allegations of influence-peddling and corruption by her confidente Choi Soon-sil. By December Ms. Park had been impeached by the National Assembly, a decision the court's ruling confirmed while Acting President Hwang Kyo-ahn governs in her place. Gerald Ford took "our Constitution works," and South Koreans

over from Richard Nixon in 1974 by declaring can now make the same boast. The challenges for Ms. Park's successor will be heavy. Pyongyang's belligerent young dicta-

tor has accelerated his nuclear and ballistic-missile programs even as he murders his political rivals overseas. One consolation is that the two leading Democrat candidates, Moon Jae-in and Ahn Hee-jung, have moderated their opposition to last week's deployment of the U.S. Thaad missile-defense system. This reflects the reality that South Korea can't afford to alienate the Trump Administration when the U.S. remains the guar-

antor of its security. The next South Korean administration will also have to act when it comes to its economic system. The scandal that brought down Ms. Park

involved the country's largest conglomerates,

known as *chaebol*. Last week prosecutors released a report that described how Samsung executives allegedly asked Ms. Park for govern-

officials to support a Samsung

ment favors, and she asked

That merger of two subsidiaries in 2015 epitomizes the corruption at the heart of Korea Inc. Minority shareholders lost

an estimated \$7 billion in a deal that allowed Chairman Lee Kun-hee to pass control of the chaebol to his son, Lee Jae-yong. Government regulators failed to protect shareholder rights, and the Park administration used the National Pension Service to help Samsung win a proxy vote.

The younger Mr. Lee is now on trial for bribery and embezzlement. Samsung will likely have to adopt a more transparent ownership structure, which will benefit shareholders. That's a promising outcome, but new laws are

needed to extend shareholder capitalism across the economy. The scandal might never have come fully to light had it not been for the muscular shareholder activism of New York-based hedge fund Elliott Associates in opposing the Samsung merger—another example of how the forces of

"globalism" can help make national politics more democratic and accountable, not less. The cases against Ms. Park and Samsung are a reminder of the danger of economic nationalism and industrial policy giving officials discretionary power over business. The next President has an opportunity to create a more entrepreneurial and competitive economy, even while staring down the North Korean threat. In both

cases, closer strategic and economic ties to the

U.S. strengthen will help.

### General Motors Says Au Revoir to Europe



**BUSINESS** WORLD By Holman W. Jenkins, Jr.

GM would be rid of a business that has lost \$20 billion since 1999. PSA would be propelled to a more competitive scale in its home markets, especially in the U.K. The deal appears to be value-creating all around, exactly what you want from a deal.

first time, to exit Eu-

rope, selling the Ger-

man Opel and British

Vauxhall brands it has

owned since the 1930s.

parent of Peugeot,

paying \$2.2 billion.

The buyer is PSA,

Nevertheless the move by GM chief Mary Barra has produced considerable hand-wringing in the U.S. The company is accused of shortsightedly abandoning a key global market, of throwing in the towel on fuel efficiency by abandoning a continent where towering gas prices encourage the purchase of small cars.

To cite one polemical excess, Jamie Lincoln Kitman, a lawyer and bureau chief for Automobile Magazine, criticizes GM in the New York Times for trying "to be more profitable whatever the cost." Never mind that scrupulous attention to cost would seem to be the exact and irreducible essence of trying to be "more profitable."

So what about Opel-Vauxhall's alleged value to GM as a source of smallcar technology? The fast-changing technology of fuel conservation today flows from GM to Opel-Vauxhall, not the other way around. Avoiding this investment commitment is why GM is bailing.

What about the scale the European market provides to defray vehicledevelopment costs, especially for lowmargin small vehicles? GM's biggest market today is China. There it makes use of small-car development expertise increasingly concentrated in its South Korean subsidiary, formerly part of Daewoo. GM may be perfectly sensible in deciding it can live without Europe.

But doesn't the company, as Fiat chief Sergio Marchionne suggested last week, play a false note when it says European geopolitical risk was a factor in its decision? The European Union's ability to provide regulatory, currency and trade stability seems to be on the downswing. Its diesel meltdown means an unpredictable flood of rejiggered mandates that any car maker would be smart to flee if at all possible.

Well, isn't GM's decision really about Donald Trump's plan to relieve the U.S.

General Motors has industry of its small-car obligations by decided, not for the nixing U.S. fuel-economy rules? Getting rid of these rules would be a service to Americans, Alas, Mr. Trump won't be doing so. He'll simply be relaxing the final phase of an Obama standard known

> to be unrealistic from the get-go. As congressional investigators later found, the Obama goal of 54.5 mpg by 2025 arose mainly out of the administration's desire for an impressivesounding "headline number."

> Mr. Obama back-loaded the rules to bite after he left office, so he could enjoy rising SUV sales and recovering auto profits on his watch. He also stipulated the 2017 "midterm review" that would now be used to save the industry from immolating itself to sell Americans cars they don't want in an era of \$2 gas.

#### Even by modern standards, the Continent's market is overregulated in its emphasis on small cars.

Yes, maybe GM could have made a go of Europe. But everything can't be a priority, and there's no reason to think GM's move is anything other than a rational cost-benefit decision.

GM already tried to unload its money-losing European operations back in 2009, under the aegis of the Obama auto-bailout task force. GM abruptly reversed course for reasons that were never clear, infuriating Germany's Angela Merkel, who had put together an aid package to further Opel's sale to a Canadian-Russian partnership.

To calm the diplomatic waters, Obama aide Ron Bloom explained longwindedly to Reuters that the White House was completely surprised by GM's reversal. This was laughable. The White House appointed four members of GM's board and controlled 500 million shares. Decisions of such magnitude—especially ones upsetting a close ally-weren't made without White House participation.

One upshot was that, especially with BMW, Daimler and VW doing OK at the time, Mrs. Merkel was hardly going to reward GM by conceding it any leeway to rationalize its German operations by closing plants and laying off workers. And so it has remained. Hardly surprising, then, is GM being eager to resume the escape from Europe so curiously aborted eight years ago.

### Making a Conservative Deal



By Kimberley A. Strassel

servative ington—the activists still know how to operate in that galaxy.

Last week, House Speaker Paul Ryan de-

buted his ObamaCare replacement bill, only to be met with scathing disdain from an array of grass-roots groups and conservative congressmen. The reaction recalled the conservative politics of the Obama era. For much of the past eight years, these groups lived to kill things. They did it in all-or-nothing style. Give us everything we want, or we will shut down the government. Vote for a bill that is 90% good-10% bad-and we'll see you in a primary.

That's the lens through which the press is viewing the ruckus. By the next day, the media had declared that the conservative right was out to tank the Rvan bill. Meanwhile. President Trump was warning Republicans that failure to replace ObamaCare would bring "bloodbath" in the 2018 midterms.

But conversations with conservative leaders suggest they are pursuing a very different strategy—one reminiscent of that long-lost galaxy. They appear to understand that the GOP has to fix health care, and this bill is the vehicle to do it. Rather than opposing it outright, they seem focused on a specific list of policy

Their message to GOP leaders: Work with us to make the legislation better. "Right now, they don't have the votes," David McIntosh, the president of the Club for Growth, tells me. "We will help deliver those votes if we get the changes we need, and get this to the president.' Mr. McIntosh is talking about deliver-

ing conservative votes. His view is that the Republican leadership has made a tactical error in catering too much toward party moderates. One biggie is its long delay in getting rid of ObamaCare's Medicaid expansion, which would hang on until 2020. Another is its continuation of the nasty "Cadillac tax" on highend employer health plans.

The Medicaid generosity was demanded by a few Senate Republicans whose states opted into ObamaCare's expansion. Ohio's Sen. Rob Portman and Alaska's Sen. Lisa Murkowski flat-out said they wouldn't support a bill that didn't include "stability for Medicaid expansion populations.'

Long, long ago, in a gal- alienated movement conservatives, in axy far, far away, con- particular senators from the 19 states pressure that bravely resisted Medicaid expansion. groups existed to make They resent being asked now to foot the legislation better. We're taxes to continue it. The revolt threatens about to see if—in this to put Mr. Trump (who is backing the new Republican Wash- Ryan bill) at war with much of his own base. It makes far more strategic sense. say conservative activists, to unite the GOP around sound changes to the bill on the House floor, and then to pressure Senate holdouts to get on board with those free-market reforms.

That appears to be the direction things are moving. Mr. Trump met last week with a delegation of conservative activists. He signaled openness to revising the bill—in particular by speeding up Medicaid reform and giving insurers more freedom to craft creative plans. His budget director, Mick Mulvaney, also sojourned to Capitol Hill to encourage conservatives to make changes to the legislation. The message, Freedom Caucus leader Mark Meadows (R., N.C.) told Politico, is that "the White House is willing to negotiate.'

The trillion-dollar question is whether the conservative groups and congressmen are truly willing to make a deal. On another of their complaints, the legislation's tax credits for people who buy individual health coverage, the White House and GOP leaders seem unwilling to budge. The credits are designed to minimize disruption in the market and to equalize tax treatment between individuals and corporations. They are subsidies, yes, but many conservative reform bills included credits and only now are folks like Mr. Meadows making an issue.

Will the activist groups embrace the bill if they get some changes, but not everything? And if so, how hard will they then work to bring along those among the conservative caucus who remain skeptical? Or will they give in to the fiction that it would be better to do nothing and let ObamaCare implode, or to try to pass a stand-alone reform bill (which will never, ver get 60 votes in the Senate)?

Soon we'll know if we've returned to that galaxy where outside conservative operations play the critical and inspiring role of achieving the best legislation possible. If they fail, the activists will be partly responsible for blowing the Republicans' best chance in a decade to prove they can govern. But if they succeed, they'll have not only notched a free-market victory for health care, but also re-established a model for constructive activism that they can roll out for coming tax reform, infrastructure talks and budget fights. Conservative groups used to be quite good at doing this. Let's But these indulgences for a few have see if they remember how.

## How Algorithms Can Help Beat Islamic State

By Joseph Rago

ou can't blame the message on the medium, not exactly. But maybe, all things considered, arming everyone with pocket supercomputers, and then filtering most of human experience through social-media feedback loops, wasn't the greatest idea.

America recently endured the most electronic and media-saturated presidential campaign in memory, with its hacks, private servers, secret videotapes, fake news, troll armies and hour-by-hour internet outrage across all platforms. And however glorious modern communications may be, they've also empowered a cast of goons, crooks and jihadists to build audiences and influence world-wide.

A technological solution, at least to that last problem, may lie 2,600 miles east of Silicon Valley, in a computer-science laboratory at Dartmouth College. Prof. Hany Farid, chairman of the department, creates algorithms that can sweep digital networks and automatically purge extremist content—if only the tech companies would adopt them.

#### He 'changed the world' by combating child porn. Now his software could suppress terrorists online.

"If you look at recent attacks, from Orlando to San Bernardino to Nice to Paris to Brussels," Mr. Farid says, "all of those attackers had been radicalized online. They weren't going to Syria. They watched YouTube videos."

He continues: "The dark side of the open internet is that truly fringe and harmful ideas now are mainstream, or at least accessible to 7½ billion people." Yet "whenever we have one of these attacks, we just wring our hands for a few weeks and then wait for the next one to happen."

Social networks have created "a new environment for radicalization and recruitment," says David Ibsen, executive director of the Counter Extremism Project, a nonprofit research and advocacy organization to which Mr. Farid is a senior adviser. Terror groups weaponize Facebook, Google, Twitter and other forums to plan or encourage violence; to discover the vulnerable or disaffected; and to publish professional, sophisticated and carefully presented propaganda.

Islamic State is basically a digital-first media startup. (By comparison, al Qaeda was MySpace.) Islamic State content is beamed out globally and becomes refractory across the viral web. Some videos show vignettes of Islamic State bureaucrats delivering social services or its fighters talking about the battle between belief and unbelief. Others are more sav-

age—beheadings, stonings, drownings, other torture and combat operations.

Mr. Farid slipped into this world slant-wise. He's a founder of the computer-science field known as digital forensics. In the late 1990s as a postdoctoral researcher, he was among the first to recognize that mathematical and computational techniques to authenticate digital images and other media would be useful to society.

Because images so powerfully change what we are willing to believe, the modern era requires a scientific method to ensure we can trust them. How can we prove, for example, that digital photographs aren't forgeries so they are admissible as evidence in court?

Images are increasingly important in cellular, molecular and neurological medicine, Mr. Farid notes, and tampering has led to more than one research-and-retraction scandal. Unscrupulous stringers sometimes file doctored photos with news organizations, and unscrupulous motorists sometimes photoshop pictures to exaggerate fender-benders for insurance claims.

Mr. Farid explains how image authentication works: "We think about how light interacts in the physical world; what happens when that light hits the front of the lens and gets focused and goes through an optical train; what happens when that light hits an electronic sensor and gets converted from an analog to a digital and then goes through a postprocessing and gets saved as .jpeg and then gets posted on Facebook." By identifying "statistical and geometrical and physical regularities" in this life cycle, software can search for inconsistencies to expose manipulation.

In 2008 this research pulled Mr. Farid into another underworld—child pornography. In 2002 the U.S. Supreme Court struck down a ban on "virtual" child porn—computer-generated images that "appear to depict minors but were produced without using any real children." Mr. Farid is sometimes brought in as an outside expert when a defendant claims the material at issue is virtual.

The child-porn industry was nearly defunct by the 1990s, because negatives and videotapes can be confiscated and destroyed. "Then the internet came," Mr. Farid says, "and all hell broke loose."

Supply can create its own demand. Much like jihadists, deviants formed a global community, finding each other online and sharing what are really crime-scene photos. Like Islamic State agitprop, material is continuously copied, cut, spliced, resized, recompressed and otherwise changed, in part to evade detection as it is retransmitted again and again.

Mr. Farid worked with Microsoft to solve both problems—detection and replication. He coded a tool called Photo DNA that uses "robust hashing" to sweep for child porn. "The hashing part is that you reach into a digital image and extract a



unique signature. The robust part is if that image undergoes simple changes, the fingerprint shouldn't change. When you change your clothes, cut your hair, as you age, your DNA stays constant," he says. "That's what you want from this distinct fingerprint."

The algorithm matches against a registry of known illegal signatures, or hashes, to find and delete photographs, audio and video. Photo DNA is engineered to work at "internet scale," says Mr. Farid, meaning it can process billions of uploads a day in microseconds with a low false-positive rate and little human intervention.

Monitoring by Photo DNA, which is licensed by Microsoft at no cost and now used in most networks, revealed that the nature of the problem was "not what we thought it was," says Ernie Allen, the retired head of the National Center for Missing and Exploited Children. Child pornography was far more widely circulated than law enforcement believed. "Hany Farid changed the world," Mr. Allen adds. "His innovation rescued or touched the lives of thousand of kids, and uncovered perpetrators, and prevented terrible revictimization as content was constantly redistributed.'

r. Farid linked up with the Counter Extremism Project to apply the same robust-hashing method to extremist propaganda. But this effort has encountered resistance. "The pushback from the tech companies has been pretty strong," the project's Mr. Ibsen says dryly.

U.S. law immunizes internet companies from criminal and civil liability for content that travels over their transoms. Their terms of service forbid abusive content, but they rely on users instead of algorithms to police violations. "It's a very slow and tedious process: You wait for it to get reported, somebody has to review it, they make mistakes," Mr. Farid says. "They take down the Vietnam napalm girl on Facebook."

Liability aside, what about their moral obligations to help prevent death, injury and destruction? "In my mind, we're not asking them even to do something that they haven't said they want to do already. We're saying, hey, would you please do the thing that you promised you would do?" he explains. "I am simply saying, look, for free, you can automate this and make it really efficient and really fast and save you money on the side."

But the "ethos" of Silicon Valley doesn't include becoming the censors of the internet, and tech firms fear a slippery slope. "The concern they have is, OK, first they came for the child porn, then they came for the extremism, next they're going to take the kitten videos," Mr. Farid says. "I think that's a bit of a hysterical leap. We are talking about content with very clear and well-defined harm. These are not abstract notions—'I don't want people to be mean to me.' We're not talking about bullying. We are talking about things with very immediate consequences and very real harm."

One question is how to distinguish support for terrorism from the merely inappropriate or objectionable. What about Islamic State's black-flag brand, or a declaration of a caliphate, or the sermons of Anwar al-Awlaki? Maybe you know it when you see it.

"Is an ISIS fighter saying 'Death to the West' extremism? I don't know. I don't want to have that conversation," Mr. Farid replies. "I'm talking about explicit acts of violence, explicit calls to violence, explicit glorification of violence, depravity, the worst of the worst of the worst."

His point is that tech companies can make judgment calls about the middle ground, wherever it might be, for themselves: "You decide: Yes, no, yes, no, and then we'll build a cache and eliminate that content from your networks."

Mr. Farid concedes that there are dangers: "This type of technology is agnostic in what it's looking for. It can be used in ways we would not approve of, such as stifling speech. You can't deny that. This is what we've learned about technology over the years—it can be used for good and for bad. Social-media platforms can be good and bad."

There has been some progress. Twitter has deleted hundreds of thousands of handles associated with terrorism since 2015, and late last year Facebook, Microsoft, Twitter and YouTube announced an industry antiterror consortium. But Mr. Farid's robust hashing remains a hard sell.

The irony is that algorithms increasingly govern the world. Networks are perpetually scanned for spam, malware, viruses; Google reads your email to target ads; credit-card companies monitor your financial transactions to prevent fraud. Facebook's Mark Zuckerberg even promises to use algorithms to distinguish truth from falsehood. As a scholar of the differences between the two, Mr. Farid has a few thoughts.

In the backwash of 2016, Mr. Zuckerberg published a 5,800-word manifesto that promised Facebook's artificial intelligence would soon learn to sort real news from hoaxes and misinformation, break up "filter bubbles" and draw a line between free speech and suborning terror. The goal, he wrote, is to preserve "our shared sense of reality."

Mr. Farid is a skeptic: "As somebody who worked for a long time in this space, I think he's underestimating what a hard problem this is." Mr. Zuckerberg "paints this picture like machine learning is going to be fully automatic—basically you'll be able to set criteria on your page, 'I don't want to see violence, I don't want to see bad words,' and it'll just work.

"Even as a technologist, and despite all the advance of technology, the human brain is astonishing at what it does. Our ability to make these types of assessments that are really hard for these AI algorithms is humbling. I don't think we'll get it in the next five or 10 years."

Meantime, Mr. Farid has developed a technology that could work today to contain a growing threat. While we await the Facebook utopia, perhaps our digital lives—and our real lives—would be healthier if it were widely deployed.

Mr. Rago is a member of The Wall Street Journal's editorial board.

### America Can't Escape the Debt Vortex

By George Melloan

he Federal Reserve's point man on banking regulation, Daniel Tarullo, will step down as a Fed governor on April 5, long before his term expires in 2022. He may be getting out just in time—before President Trump enacts protectionist policies that would further roil the credit markets Mr. Tarullo and his fellow governors have already distorted.

During Mr. Tarullo's eight years at the Fed, the central bank has encouraged a massive accumulation of government, corporate and consumer debt. Credit bubbles usually pop at some point and the consequences aren't pretty. The stock-market crash of 1929 fol-

lowed a credit boom, and so did the crash of 2008. In both cases, Washington overreacted, producing a 10-year depression in the 1930s and a weak recovery after the 2009 recession.

Most commentators, including me, have blamed this new debt balloon on the easy credit produced by the Fed's near-zero interest-rate targets since the 2008 crash. But we may have attributed too much power, and culpability, to the Fed.

Interest rates have also been held down by heavy global demand for U.S. dollar assets from bigdollar earners such as China and Japan. Foreign central banks boosted their holdings of Treasury bonds to \$3 trillion in 2013, up

Chief Executive Officer, News Corp

from \$1.2 trillion at the beginning of 2008, before leveling off in subsequent years. The rollover of those holdings has sustained steady foreign demand for Treasurys, keeping prices high and interest rates low.

But the Fed helped. Its three rounds of "quantitative easing"—effusions of newly created dollars—in roughly the same period (QE3 ended in October 2014) added a further \$3.5 trillion in demand for Treasurys and for the troubled mortgage-backed securities issued by Fannie Mae and Freddie Mac. Cheap credit, and miserly yields on savings, pervaded the U.S. economy.

Through its bond purchases the Fed ballooned its holdings to the present \$4.4 trillion. By law, the interest return on those securities goes back to the Treasury after the Fed deducts the considerable amount it spends on itself. With almost free credit, Washington nearly doubled the national debt in seven years. The annual federal deficit continues to hover between \$500 billion and \$1 trillion.

To avoid rampant inflation after putting all that new money into circulation, the Fed cleverly arranged for banks to lock up some \$2 trillion in their reserve accounts at the central bank, paying them modest interest (now 0.5%) for their trouble. That has prevented the excess reserves from flooding into the economy in the form of cheap loans.

Lacy Hunt, an economist with Hoisington Investment, estimated at a recent conference held by Grant's Interest Rate Observer that

debt of all kinds in the U.S. now to-

tals more than \$69 trillion. That's more than double the \$30 trillion recorded by Fed statisticians as recently as 2000. If the Hunt figure is correct, then total debt is now about 370% of GDP, up from 294% in 2000.

# Total obligations in the U.S. have hit 370% of GDP—and Trump seems intent on making matters worse.

But foreign demand for American debt is showing signs of weakness. China has traditionally used most of the dollars from its large trade surplus with the U.S. to buy Treasurys. But Beijing's foreign-currency reserves are declining as business slows, the financial system grows more unstable and capital flees the country. In January China's reserves dropped below \$3 trillion for the first time since 2011. Total dollar holdings by foreign central banks have fallen to around \$2.8 trillion today from \$3 trillion in late 2013.

central banks have fallen to around \$2.8 trillion today from \$3 trillion in late 2013.

In the U.S., consumer-credit outstanding fell sharply after the 2008 crash but began rising again in 2013. It is now up 29% from five years ago—and 16% not counting the blowout in government loans to students. The Fed's latest survey of senior loan officers indicates that demand for mortgages is slackening and that the "quality" of auto and credit-card debt is

shakier. This suggests that many

consumers have maxed out their

ability to borrow. The report also

notes that banks are tightening their lending standards on credit cards and auto loans.

The famed 1930s economist Irving Fisher taught that a credit cycle ends when both lenders and borrowers pull in their horns, which is what may be happening now. He wrote that the end of a credit cycle signals a downward turn in the business cycle. If so, the current bull market in stocks is also at risk.

There isn't much the Fed can do

More direct bond buying—a fourth round of quantitative easing—would send the debt load up faster. Conversely, selling from the central bank's bond portfolio would likely raise interest rates by causing the debt supply to exceed demand. The Fed's monthly striptease about interest-rate targets, watched so excitedly by reporters and traders, is pretty much irrelevant to all this.

Nor is there much that Mr. Trump can do except make it worse. But he seems intent on that—threatening trade wars against America's biggest trading partners. If the president blocks their ability to earn dollars, he diminishes their ability to bail the U.S., and themselves, out of the global debt slough. The past decade of government and Fed profligacy isn't his fault, but that still isn't an argument for recklessness. If this ends in tears, Mr. Trump will get the blame.

Mr. Melloan, a former deputy editor of the Journal editorial page, is author of "When the New Deal Came to Town" (Threshold Editions, 2016).

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### LIFE & ARTS

**WHAT'S YOUR WORKOUT?** | Jen Murphy

### A Family That Lives by the Sword

Robert Harris got hooked on fencing by trying it with his wife and two daughters; a cure for monotonous exercise

**MOST PARENTS** try to keep their children away from sharp objects. Robert Harris buys his girls

The sport of fencing has taken over the Harris household. Mr. Harris, 45, his wife, Maia, 42, and daughters Stella, 15, and Emma, 18, train and compete together. Six years ago, a coupon for youth fencing lessons arrived in the mail. "I thought, 'Great, another after-school activity,'" he recalls. When he picked up the girls from practice at Bay State Fencers in Somerville. Mass., he observed adults wearing fencing gear. "You don't see the parents at ballet in tutus," he says. "I was intrigued."

Mr. Harris, who owns a restaurant and catering business in Cambridge, Mass., had been looking for a new workout. "When I hit 40 I realized I needed to exercise at least an hour four times a week to maintain my health," he says. In 2013, he signed up for fencing lessons and found the cure for his workout boredom. "Fencing is a mental sport with strategy, perfection of form and endurance training, so the time passes quickly," he says.

Foil, epee, and saber are the three types of swords used in the sport. Mr. Harris competes in epee (pronounced "EPP-ay"), which is similar to a dueling sword but heavier, with a thicker, stiffer blade. Touches are scored with the point of the blade and registered by electronic sensors.

"Watching the sport can be like watching paint dry, but it's an intense workout," Mr. Harris says. "You're essentially in a squat the whole time. You have to be patient. If you attack your opponent, you make yourself vulnerable by opening a spot on the body that they can hit."

Ms. Harris, an attorney, dabbled in the sport but started training and competing one year ago. "The sport has really brought us together as a family."

Mr. Harris is ranked 12th nationally in the veteran age 40-49 clas-



The Harris family (above, left to right): Emma, Maia, Robert and Stella all compete at the national level. Maia and Robert practice, right.

sification and tries to attend regional or national competitions once a month. His goal is to compete in his age group at fencing's National Championship in Salt Lake City in July.

#### The Workout

Mr. Harris and his family train at Bay State Fencers four times a week, usually from 7 to 9 p.m. He works with a coach on Saturdays. He warms up by running laterally, running with high knees, kicking his heels to his behind. He stretches and then does blade drills. "It's not a sport of strength," he says. "You naturally want to use your shoulder to at-



tack, rather than extend your arm. But if you tighten up and push hard vou go off-target.'

The worst strikes, he says, can feel like a full-speed punch. "I've

gotten a few bruises, but being hit by a paintball is way worse."

Sometimes he faces off against family members, "There's definitely some friction when I fence

against my wife," he says. He rarely beats his eldest daughter, who plans to fence at the University of Pennsylvania.

In the summer, Mr. Harris cycles for at least one hour twice a week. "I need to keep my cardio up," he says. "In epee, it's easy to rush your actions and if you're out of shape, you'll huff and puff."

#### The Diet

Mr. Harris is 6-foot-2 and weighs 230 pounds. He'd like to lose 30 pounds with a smarter diet. "I burn 1,400 calories fencing," he says, "but then I'll go to a restaurant and have two beers, fries and a cheeseburger." He embarked on a diet makeover in January focused on vegetables, lean meats and good fats. He limits alcohol to two days a week. After three weeks he lost 7 pounds. He has a protein shake before fencing and the familv eats out after practice. He uses the MyFitnessPal app to help estimate calories.

#### The Cost & Gear

"Competing at a national level and flying to competitions takes a good chunk of the family budget," Mr. Harris says. A family membership at Bay State Fencers costs \$150 a month. A fencing uniform consists of a mask (\$50-\$250), jacket (\$40-\$320), underarm protector (\$20-\$130), chest protector (\$30), gloves (\$11-\$80), kneelength socks (\$12) and pants (\$40-\$200). His epee cost \$180.

He likens the uniform to wearing a chef coat in a hot restaurant kitchen. "You sweat a lot," he says. He splurged on a \$180 pair of Nike fencing-specific shoes, but says squash or volleyball shoes work fine.

#### The Playlist

1 City section

woodwind

3 "Don't panic!"

4 In perpetuity

5 One way to shop

7 Worker with a

9 "My word!"

Dewey and Louie

11 Parent company of Converse

12 Rapper-actor on

13 November 11

honorees

21 Gratifies fully

24 Arranged for

26 Haul over the

25 Provokes

coals

publication

19 Really impresses

"Law & Order: SVU"

2 Slender

"You want something with a beat to get you going," he says. "The club owner used to play classic rock and I finally asked to put on my ska playlist, which is mellow but still upbeat."

#### Weather AccuWeather.com wn are today's noon positions of weather systems and precipitation. Temperature bands are highs for the day -10 -5 0 5 10 15 20 25 30 35 Warm Rain T-storms Snow Flurries **Global Forecasts** s...sunny; pc... partly cloudy; c...cloudy; sh...showers; t...t'storms; r...rain; sf...snow flurries; sn...snow; i...ice 16 23 pc

#### Hi Lo W City Amsterdam 13 pc s 13 Anchorage -10 Athens Atlanta Baghdad Baltimore 26 Bangkok Beijing Berlin pc sh 10 Bogota 20 Brussels 25 23 13 13 Cairo -5 24 Calgary

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Caracas

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Chicago

Dallas

Denver

Detroit

Edinburah

Dubai

Hanoi	30	20	pc	23	17	C	Paris
Havana	31	18	рс	28	17	sh	Philad
Hong Kong	24	18	pc	20	16	C	Phoer
Honolulu	29	22	рс	29	21	S	Pittsb
Houston	23	10	C	23	11	S	Port-a
Istanbul	10	6	r	9	6	r	Portla
Jakarta	33	25	C	32	24	sh	Rio de
Johannesburg	25	13	t	25	13	sh	Riyad
Kansas City	5	-6	C	3	-8	sf	Rome
Las Vegas	29	16	S	31	15	S	Salt L
Lima	29	22	C	30	23	pc	San D
London	15	8	рс	16	7	pc	San F
Los Angeles	32	16	S	31	16	S	San J
Madrid	15	9	sh	19	7	C	Santi
Manila	32	25	sh	33	25	t	Santo
Melbourne	27	16	S	32	21	S	Sao P
Mexico City	21	9	рс	21	9	pc	Seatt
Miami	28	19	C	27	14	pc	Seoul
Milan	15	5	pc	18	6	pc	Shan
Minneapolis	-2	-15	sn	-3	-14	pc	Singa
Monterrey	27	13	pc	25	13	pc	Stock
Montreal	-8	-11	pc	-4	-7	pc	Sydne
Moscow	7	-1	pc	5	-3	S	Taipe
Mumbai	33	25	pc	33	25	pc	Tehra
Nashville	10	1	r	8	-5	C	Tel A
New Delhi	25	10	pc	27	13	pc	Tokyo
New Orleans	22	11	C	21	9	S	Toron
New York City	1	-2	S	1	-3	sn	Vanco
Omaha	1	-7	C	2	-8	S	Wash
Orlando	27	15	t	25	10	pc	Zurich

C	Ottawa	-9	-14	рс	-6	-13	C	
:	Paris	15	4	рс	15	6	S	
sh	Philadelphia	3	-2	S	2	-3	sn	
:	Phoenix	32	17	S	33	17	S	
5	Pittsburgh	4	-1	C	1	-9	sn	
5	Port-au-Prince	32	20	рс	34	21	pc	
	Portland, Ore.	14	10	r	16	10	sh	
h	Rio de Janeiro	33	24	pc	29	23	t	
h	Riyadh	28	17	C	24	14	S	
f	Rome	16	4	S	16	4	pc	
;	Salt Lake City	18	6	pc	22	9	pc	
C	San Diego	26	15	S	25	16	S	
C	San Francisco	21	10	S	21	11	S	
;	San Juan	29	23	pc	29	23	S	
:	Santiago	32	13	S	28	12	pc	
	Santo Domingo	30	21	pc	30	21	pc	
;	Sao Paulo	24	19	sh	25	19	r	
C	Seattle	13	9	r	14	10	r	
C	Seoul	12	-1	S	11	0	S	
C	Shanghai	11	5	r	13	3	S	
C	Singapore	31	25	pc	31	25	t	
C	Stockholm	6	1	C	8	1	C	
C	Sydney	26	20	pc	24	21	t	
;	Taipei	23	14	r	16	14	r	
C	Tehran	18	7	pc	16	6	pc	
	Tel Aviv	19	12	sh	18	12	sh	
C	Tokyo	12	8	r	14	7	рс	
,	Toronto	-5	-9	sn	-7	-12	sn	
in	Vancouver	10	6	sh	11	8	r	
;	Washington, D.C.	7	0	sn	3	-5	sn	
C	Zurich	13	0	pc	14	0	pc	ı

#### The WSJ Daily Crossword | Edited by Mike Shenk



#### **BOOKMAKING** | By Daniel Hamm

26 Book publisher's

32 Ride a ten-speed

29 Quick snooze

34 Completely

reasonable

35 Spoken exams

in a way

purity

36 Takes too much,

38 Floral symbol of

(miniature cake)

33 Equip

Capitol helpers?

45 Minimal

46 Painter

amount

Magritte

50 Brain parts

market

indicator?

56 Cupboard part

57 Himalayan holy

man

58 Tolerate

59 Five carats

60 Spots for

contacts

61 It may hold a

flag pin

62 Wraps up

47 Released, as a

53 Book publisher's

Acr	000
ACI	J22
1	Sported

- 5 Cry from Laura
- Petrie 10 Coll. kin
- 14 Collaborate with a criminal, in a 15 Impoverished
- 16 Pleasant
- 17 Colosseum locale 18 Book publisher's garment for
- boating safety? 20 Start of a formal letter
- 24 Flood stopper
- 23 Put
- appearance
- 22 Young hooters
- 39 Cow's call 40 "Once upon
  - 41 Rep.'s rival
  - 42 Book publisher's
    - low-growing
- ► Solve this puzzle online and discuss it at WSJ.com/Puzzles.

- 27 Eagle's home:
  - Var. 28 TV teasers
  - 29 Like residents who have never
  - 30 Japanese film genre
- 6 Bequest recipient 31 Saint recognized
  - as the first Pope
  - 34 Made nervous 37 Indiana cage
  - 42 Computer whiz
  - 43 Tire type 44 Philadelphia

  - 45 "Star Wars"
  - 47 Cruise stop
  - 48 Stopover

  - 49 Vague amount
  - 50 Hand over

  - 51 Pothole's place
  - 52 Prepares for
  - battle
  - 54 37-Down's org.
  - 55 Party bowlful

Previous Puzzle's Solution



The contest answer is MYSELF. The grid contains six I's, each of which can be changed to a different letter to make two new crossing answers (WARMER/MAMA, SYNTAXES/DAYS, POSSE/ SHEAR, REVELED/DENTS, PLASTERS/JUMP BALL and WAFTED/CALF). The six new letters, in order, spell the contest answer

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# BUSINESS & FINANCE

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THE WALL STREET JOURNAL.

Monday, March 13, 2017 | **B1** 

Uber Seeks

Bid to Form

**Euro vs. Dollar** 1.0668 ▲ 0.86%

Mobile

Browsers

Emerge as

Gatekeepers

The number of internet

roughly doubled in the past

lion. The people who have come aboard in the past few

years are spending their

KEYWORDS

eight years to around 3.5 bil-

time in some-

thing that was overshadowed

long ago in

countries by

apps: the mo-

developed

bile web browser. Single

purpose apps like Facebook and Snapchat are the prod-

uct of markets where

monthly data plans and

home Wi-Fi are abundant.

App stores require email addresses and credit cards,

two things many new phone owners just don't have.

In places like India, Indo-

nesia and Brazil, it's easy to

buy an Android phone for as

older second-hand (or third-

But there's likely to be little

little as \$25—even less for

hand) refurbished phones.

onboard storage, and the

too precious to waste on

pay-as-you-go data plan is

apps, especially those that

send and receive data even

Browsers are popular

again, not just because typ-

ing a URL has become sim-

pler, but also because they

work harder to compensate

for the nature of wireless ac-

cess in emerging markets.

Southeast Asia, South Asia,

South America, Mexico and

the dominant browsers—Ali-

Mini by Opera Software and

Google Chrome from Alpha-

bet Inc.—have the ability to

compress browsing data, by

up to 90% in some cases, so

Opera Mini also have robust

built-in ad blocking, further

cutting down on data costs.

other incentive: free daily data. By delivering 10 megabytes (or about 20 minutes) of free data a day through

its mCent Browser, Jana

hopes to build a following and pay for it by charging

for conventional ads and

It also intends to charge

lated—UC Browser had

as of last April—these

browser businesses are

and emerging markets,

erations behind what it

making a virtue out of the

constraints of mobile-tele-

com systems in rural areas

where infrastructure is gen-

might be in richer countries.

sponsorship of the browser.

partners to be their brows-

ers' default search engine.

In terms of the scale of

the users they have accumu-

more than 400 million users

On Friday, Jana, a mobilead company, entered this browser market with an-

people burn up as little as

possible. UC Browser and

Africa are all areas where

baba's UC Browser, Opera

when you aren't using them.

users world-wide has

**FTSE 100** 7343.08 ▲ 0.38%

Gold 1200.70 ▼ 0.14%

**WTI crude** 48.49 **▼** 1.60%

German Bund yield 0.487%

10-Year Treasury yield 2.582%

To Block

# Credit Reports to Drop Some Data



Many tax liens and civil judgments will be removed or excluded.

By AnnaMaria Andriotis

Many tax liens and civil judgments soon will be removed from people's credit reports, the latest in a series of moves to omit negative information from these financial scorecards. The development could help boost credit scores for millions of consumers, but could pose risks for lenders.

The three major credit-reporting firms-Equifax, Experian and TransUnion—recently decided to remove taxlien and civil-judgment data starting around July 1, according to the Consumer Data Industry Association, a trade

group that represents them. intensified in recent years The firms will do so if those around credit reports and the The firms will do so if those data don't include a person's name, address, and a social-security number or date of birth.

Many liens and most judgments don't include all three or four. This change will apply to new tax-lien and civil-judgment data that are added to credit reports as well as existing data on the reports.

The result will make many people who have these types of credit-report blemishes look more creditworthy.

The three main credit-reporting firms jointly decided to make the changes. They did so as regulatory pressure has

outsize role they typically play in lending decisions. The Consumer Financial

Protection Bureau earlier this month released a report citing problems that it found while examining credit bureaus and changes it is requiring. Issues the agency cited included improving standards for public-records data by using better identitymatching criteria and updating records more frequently.

Inaccurate information on credit reports, especially if it is negative information, can Please see CREDIT page B2 **A Union** In Seattle

By Greg Bensinger

Before accepting rides on his Uber app each day, Seattle driver Fasil Teka must first choose whether to listen to company-run podcasts on voting rights, collective bargaining and city council hearings.

He and other drivers in the city have received text messages, meeting invites and phone surveys from ride-hailing firm Uber Technologies Inc. in an attempt, the company says, to sway them against unionizing.

Mr. Teka said he isn't persuaded. "Uber is telling us they don't want us to join a union, the 41-year-old said, one of Uber's 1.5 million "driver partners" as the company calls them. "Uber also tells us we're their partners, but they don't treat us like we are partners."

Uber is squaring up for a long fight in Seattle to block the nation's first real unionization effort for app-based drivers, pitting it against the Teamsters labor union and Se-

The Seattle tussle is the latest challenge to Uber's independentcontractor model.

attle's city council. Uber says a union threatens the freedom of its drivers to work as much or

as little as they wish and,

moreover, isn't something its drivers want. "We continually seek to incorporate driver feedback on how their experience can be improved," said Caleb Weaver, head of Uber's public policy in Washington state. "At the most

fundamental level in this business, we don't succeed unless drivers succeed." In a series of podcasts Brooke Steger, Uber's general manager for the Pacific Northwest, interviews drivers about

how they would be affected by a union, concluding that it isn't in their best interests.

"It's totally impossible to know how the ordinance could limit who can drive, when you can drive and where vou can drive, as well as what vou might be required to pay in union dues," Ms. Steger says in one podcast.

The Seattle tussle is the latest challenge to Uber's independent-contractor model, which pushes expenses such as fuel, vehicle maintenance and insurance on to the drivers, in exchange for the promise of a steady stream of riders and a flexible work schedule. The model is a chief reason for Uber's \$68 billion valuation. though the company has faced

Please see UBER page B2

### Alitalia Turns to Plan B

As three-year turnaround effort shows little progress, Italian carrier's board examines new cost cuts



#### By Manuela Mesco

Less than three years after Etihad Airways saved Alitalia SpA from bankruptcy, the Italian airline is once again on the

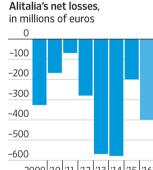
After spending €400 million (\$427 million) to buy effective control of Alitalia in 2014, the Dhabi-based launched a much-ballyhooed effort to improve the Italian airline's service, expand its international routes and make the domestic business leaner.

But the drive has done little to push up passenger numbers or beat back fierce competition from low-cost carriers, leaving Alitalia at risk of bankruptcy. It is only weeks away from grounding its fleet and seeking another reboot.

Thursday, Alitalia's board examined a new business plan-including cost cuts—and a management shake-up for a former statecontrolled airline that hasn't

#### **Losing Altitude**

Alitalia continues to lose money as passengers opt for alternatives. Total air passengers in Italy



Alitalia Ryanair 35 million 30 15 2009 10 11 12 13 14 15 16\* 2014 2016

\*Estimate by Bruno Leoni Institute

Sources: Alitalia (losses); Italian civil aviation authority (total passengers)

THE WALL STREET JOURNAL.

turned a profit in nearly 20 vears. The board is set to approve the plan this week.

When Etihad bought 49% of Alitalia in 2014, many in Italy hoped the Middle Eastern carrier would provide a fresh start to an airline laid low by

vears of mismanagement and political interference.

With a goal of turning a profit by this year, Alitalia cut unprofitable domestic routes and overhauled its aging fleet. Hoping that better service would lure travelers away

retrained Alitalia employees, teaching them everything from proper makeup application to foreign languages. But the strategy has flopped. The airline had 23 million pas-

from low-cost carriers, Etihad

sengers last year, 270,000 fewer than when Etihad entered in 2014. Meanwhile, Ryanair Holdings PLC, which overtook Alitalia as market leader in Italy in 2014, saw passengers rise 25% to 32.6 million over the same period. Alitalia's load factor-or the percentage of seats filled—was about 76% in 2016, below both Rvanair's about 95% and the 80% target management had set, according to research institute Bruno Leoni.

Alitalia declined to comment on the estimates, and said its revenue was hit last year after terrorist attacks in Europe led to reduced air travel across the continent.

"[Alitalia] expected the market would react better to Please see PLAN page B2

### In U.S., Over a Million Grab Tax-Refund Loans

By Bowdeya Tweh

More than 1.5 million U.S. taxpayers have taken out loans against their expected 2016 refunds, fueled in part by the federal government's delay in disbursing money to certain Tax preparers are making

unsecured loans that are free of interest and upfront fees in an effort to aggressively court customers. The emergence of these refund-advance loans marks a shift away from higher-margin products offered more than a decade ago that were derided by consumer groups, lawmakers and regulators for saddling consumers with excess fees. This year, the Internal Rev-

As the global middle class continues to rise in emergenue Service delayed refunds ing markets, browser makers until late February for taxpaylers claiming the earned-in-Please see MIMS page B4

come tax credit or additionalchild tax credit, a tactic aimed at reducing fraudulent filings and incorrect refund distribu-

H&R Block Inc. said Wednesday that it has approved 840,000 refund-advance loan applications worth about \$700 million this tax season, its first time offering the fee-free product. Meanwhile, **Liberty Tax** Inc., which runs Liberty Tax Service and SiempreTax+, said Wednesday it had a 40% increase in such refund-advance loans from a year ago, rising to 175,000 loans approved as of Feb. 28.

Privately held Jackson Hewitt Tax Service Inc. provided 485,000 refund-advance loans this tax season, double the volume from the prior

The IRS expects to process

more than 153 million individual tax returns this year. Through March 3, the agency said it had processed about 39% of that total.

Estimates of how many people took advantage of these types of products industrywide this season aren't yet available, but levels are likely to be higher than a year ago, bolstered by H&R Block's entry into the market and the IRS refund disbursement de-

Tax-prep companies have focused marketing efforts on customers who are early filers, many of whom are cashstrapped and rely on refunds for critical living expenses or to pay down debt.

"What we're seeing is a change in consumer behavior," said George Tong, a San Francisco-based senior research



some taxpayers this year.

analyst at Piper Jaffray Cos. As a result, companies are willing to absorb loan-program fees as part of customeracquisition costs, he said.

But not all tax-preparation companies are joining the fray. **Intuit** Inc., which owns TurboTax, doesn't provide refundanticipation loans. Chief Executive Brad Smith told analysts

last month that after exiting that line of business a decade ago, the company wasn't planning a return because "we didn't feel that that was the right approach for families who were looking to get money in their pocket."

Tax preparers hoped the refund-advance promotions would lift traffic through the early part of the tax season. But through March 3, the number of returns filed was down 8.5%, and electronic returns filed using professional tax preparers dropped 10% from the comparable 2016 period, according to IRS data.

Consumer advocates say the current generation of loans are different than predatory products of years past, but they still require supervision. "There are some poten-

Please see LOAN page B2

#### TO BUSINESSES

These indexes cite notable references to most parent companies and businesspeople in today's edition. Articles on regional page inserts aren't cited in these indexes

A	F
otelsB8 SystemsB4	Federal ReserveA5,B5 Fortress Investment GroupB5
oa GroupB7	G
B1	GoogleA7,B4
zB5	Н
t A7,B1,B2,B4 DataB3 .comB7 n International	Hewlett Packard Enterprise
oupA1	1
ncial Services B7 A7 kB4	IntelB8 InterContinental Hotels GroupB8 IntuitB1
В	J
Monte dei Paschi naB5	Jackson Hewitt Tax ServiceB1
С	L
cionalB8	Liberty TaxB1 Lone Star FundsB5 LyftB2
AirwaysB1	M
B8	Marriott InternationalB8 Meta Financial Group.B2

F	MicrosoftA7,B4,B8
ReserveA5,B5	Morgan StanleyB3
Investment	N
B5	NasdaqB7
G	P
A7,B4	PostmatesB2
Н	Priceline GroupB8
Packard	R
riseB8 ockB1	Ryanair HoldingsB1
A1	S
B8 atinental Hotels B8 B1	Shanghai Lujiazui International Financial Asset ExchangeB7 SnapB7 SolarCityB4 SonyB4
Hewitt Tax	T
eB1	TaskRabbitB2
L	TeslaB4
TaxB1	TransUnionB1
ar FundsB5	U
B2	Uber TechnologiesB1
M	UniCreditB5
t InternationalB8	V
nancial Group.B2	VolkswagenB2

<b>B</b> Bay, T.JB3	Hillion, Steven
Cannon-Brookes, MikeB4	Kalanick, Travis Kinahan, JJ Kudla, David
Flint, DouglasA1	Le Pen, Marine Longueau, Emilie de!
Gugle, AnnB7 <b>H</b> Hewitt, JohnB2	Mario Draghi

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Pen, MarineB8 ngueau, Emilie deB3	<b>T</b> Tong, GeorgeB1 Tucker, MarkA1
rio DraghiB8 Millan, JeffB3	<b>W</b> Winterkorn, MartinB2

### CREDIT

Continued from the prior page derail consumers from being able to gain access to credit and even lead to other setbacks like not being able to rent an apartment or get a job.

One in five consumers has an error in at least one of their three major credit reports, according to a 2013 Federal Trade Commission study mandated by Congress. The three credit bureaus received around eight million requests disputing information on credit reports in 2011, according to the CFPB.

In 2015, the credit-reporting firms reached a settlement with New York's attorney gen-

Regulatory pressure has intensified over the role of credit reports in loan decisions.

eral over several practices, including how they handle errors. This was followed by one with another 31 states. One more state, Mississippi, followed last year.

The state settlements had already prompted the creditreporting firms to remove several negative data sets from reports. These included nonloan related items that were sent to collections firms, such as gym memberships, library fines and traffic tickets. The firms also will have to remove medical-debt collections that have been paid by a patient's insurance company credit reports by 2018.

Such changes might help borrowers and could spur additional lending, possibly boosting economic activity. But it could potentially increase risks for lenders who might not be able to accurately assess borrowers' default risk.

Consumers with liens or judgments are twice as likely to default on loan payments according to LexisNexis Risk Solutions, a unit of RELX Group that supplies public-record information to the big three credit bureaus and lend-

"It's going to make someone who has poor credit look better than they should," said John Ulzheimer, a credit specialist and former manager at Experian and credit-score creator FICO. "Just because the lien or judgment information has been removed and someone's score has improved doesn't mean they'll magically become a better credit risk."

Removing this information from credit reports also will lead to changes in people's credit scores. Roughly 12 million U.S. consumers, or about 6% of the total U.S. population that has credit scores, will see increases in their FICO score as a result of this change, according to the company that created the FICO scores, which are used by lenders in most U.S. consumer underwriting

For most of these consumers, the score increase will be relatively modest. FICO projects that just under 11 million people will experience a score improvement of less than 20

Scores are projected to rise by at least 40 points for around 700,000 consumers, according to FICO. In many cases, that can mean the difference between getting approved for credit or denied it. Civil judgments include

cases in which collection firms take borrowers to court over an unpaid debt. Ankush Tewari, senior director of credit-risk assessment at LexisNexis Risk Solutions, says that nearly all judgments will be removed and about half of tax liens will be removed from credit reports as a result of the changed approach. He says LexisNexis will continue to offer the data directly to lend-

### **BUSINESS & FINANCE**

## VW Faces Up to Penalties

Auto maker pleads guilty in U.S. court, formalizing resolution of emissions case

Volkswagen AG pleaded guilty to criminal charges for rigging diesel-powered vehicles to cheat on government emissions tests, capping the fi-

> By Mike Spector in New York and Mike Colias in Detroit

nal significant U.S. legal settlement expected in a long-running deception that hammered the German auto company's reputation and finances.

In an unprecedented resolution for a criminal case involving an automotive company, Volkswagen pleaded guilty on Friday in a Detroit federal court to conspiracy to defraud the U.S., commit wire fraud and violate the Clean Air Act; obstruction of justice: and import violations. The auto maker's plea agreement, which was disclosed earlier this year, includes a \$2.8 billion criminal fine and resolves a longstanding Justice Department probe.

Volkswagen has also agreed to an additional \$1.5 billion civil penalty to settle the U.S. investigation. That is on top of previous civil settlements with consumers, regulators, dealers and state attorneys general in the U.S. that could cost Volkswagen more than \$20 billion. Some current and former Volkswagen executives and employees were separately charged in the criminal probe, but weren't the subject of Friday's court hearing.

Volkswagen General Counsel Manfred Döss entered Friday's guilty plea on the company's behalf before U.S. District Judge Sean Cox. The company was arraigned on the charges earlier before a magistrate judge in a separate hear-



A Volkswagen factory in Wolfsburg, Germany, this month.

ing. Volkswagen signed the plea agreement with U.S. prosecutors in January.

Judge Cox said he would forgo sentencing until April 21. That final step would formalize Volkswagen criminal penalties that include the assignment of an independent monitor to audit its regulatory-compliance practices for at least three years.

"Volkswagen's offenses are very, very, very serious," the judge said. "I just want more time to reflect and study."

The guilty plea codified Volkswagen's admission to conspiring for nearly a decade to deceive U.S. officials with illegal software known as defeat devices that allowed nearly 600,000 diesel-powered vehicles to pass emissions tests and then pollute beyond legal limits on the road.

The U.S. Environmental Protection Agency disclosed Volkswagen's deception in September 2015 and said the company's vehicles spewed toxic tailpipe emissions up to 40 times above allowable levels. Volkswagen admitted to installing the problematic software on some 11 million vehicles globally, sparking govern-

#### **Costly Car Emissions**

Volkswagen is on the hook for \$25 billion in the U.S. due to its emissions-cheating scandal, depending on the mix of vehicle buybacks and repairs.

Potential maximum cost

\$14 billion

for repurchasing vehicles \$5 billion **Environmental remediation** emission vehicles \$2.8 billion \$1.5 billion Additional civil penalty \$1.2 billion Settlement with U.S. dealers \$600 million Settlement with state attorneys general

Note: Figures are approximate ource: Volkswagen AG, court documents THE WALL STREET JOURNAL.

ment hearings, litigation and investigations around the world targeting the company and many of its senior executives

Volkswagen's emissions fraud was "a very well thought-out, calculated, wellplanned offense," said Assis-

tant U.S. Attorney John Neal during Friday's court hearing, adding the conspiracy reached the "highest levels of the corporation."

Mr. Neal said the government could have fined Volkswagen up to \$34 billion, but assessed a lower figure given the auto maker's cooperation with the investigation, previous large civil settlements and efforts to compensate consumers affected by its deception.

"It would have been a lot bigger had [Volkswagen] not taken those steps," Jason Weinstein, a lawyer at Steptoe & Johnson LLP representing the auto maker, said in an interview.

Mr. Döss said during court proceedings that some Volkswagen supervisors and employees destroyed documents and files upon learning of the emissions probe, and that the auto maker had deceived U.S. environmental regulators and customers.

A federal grand jury separately indicted seven Volkswagen executives and employees for their role in the emissions fraud. Many of them are believed to reside in Germany and it isn't clear whether they would travel to the U.S. to face charges.

Former Volkswagen Chief **Executive Martin Winterkorn** resigned in the wake of the emissions crisis, and the company then suffered sales declines and financial losses, in part due to freezing affected vehicles on U.S. dealer lots. But the auto maker reported a profit for 2016 and passed Toyota Motor Corp. as global car-sales leader.

The corporate criminal case against Volkswagen represented the harshest punishment vet stemming from a government crackdown on automotive firms for safety and environmental lapses.

—Christina Rogers contributed to this article

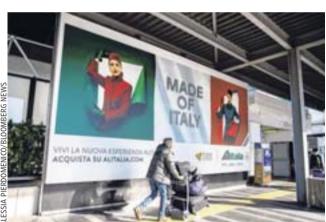
Continued from the prior page the improvement of the service," said Oliviero Baccelli, transportation expert at Milan's Bocconi University.

Etihad said that Alitalia's turnaround isn't yet complete and it is still addressing longstanding issues at the Italian carrier. One major handicap has

been the more lucrative longhaul routes. Alitalia has added iust six intercontinental routes in two years. The company said it has struggled to expand further because of the hundreds of millions required to establish new intercontinental routes—they typically lose money for some time—and because a longstanding joint venture Alitalia has with Air France and Delta prevents the Italians from expanding North American destinations, which are among the most profitable for the Italian carrier.

As a result, Alitalia remains focused on routes dominated by low-cost carriers, competing with budget airlines on 70% of its flights. At the same time. Alitalia's costs are high. even after shedding 2,000 employees since 2014.

For instance, the company typically spends up to 15% more than rivals on leasing aircraft and fuel. Alitalia said in the past its troubled finan-



cial condition has made it difficult to negotiate leasing and fuel contracts, but it is planning to look to improve the terms. The company also covers hotel costs for its flight attendants after a flight, unlike some no-frills airlines. Alitalia now loses at least €1.5 million a day, according to Bruno Leoni. Alitalia said it is losing money, but declined to comment on this estimate.

Analysts say the failed turnaround also exposes flaws in Etihad's strategy of spending heavily to stitch together a network of disparate airlines that would route traffic through its Abu Dhabi hub and enable it to compete with mega-carriers such as Emirates Airlines. Stakes in carriers such as India's Jet Airways and Virgin Australia Holdings Ltd. and Air Berlin PLC have brought meager returns.

Etihad said that the Italian carrier, as well as Air Berlin, has "required deeper restructuring and change," but that the investments in those and other companies have also allowed it to save money "by joint procurement activities and other business synergies.' It added that the investments helped generate traffic via its Abu Dhabi hub.

Now, Alitalia-Etihad's biggest investment—is considering a new plan involving €1 billion in cost cuts by 2019, a management shake-up and layoffs. It wants to segment its passengers more aggressively, with socalled naked, or no frills, seats for penny pinchers and full-service tickets for others, a person familiar with the matter says. Under this plan, the company anticipates turning a profit within three years.

Continued from the prior page tial risks, but as far as we can see, the consumers aren't being charged a fee," said Chi Chi Wu, a staff attorney with the National Consumer Law Center in Boston.

Still, Illinois Attorney General Lisa Madigan cautioned residents in February to "be skeptical" about these types of products. Prepaid debit cards loaded with refund advances can carry tees tor certain types of transactions, such as ATM withdrawals.

In a conference call with analysts, H&R Block Chief Executive William C. Cobb said "we're very pleased with our first year with this product." The loan, offered through Feb. 28 with partner Meta Financial Group, lent as much as \$1,250 to eligible tax filers who visited branch offices in advance of their refund.

Meta Financial said Tuesday it originated \$1.26 billion of refund-advance loans between Dec. 12 and Feb. 28. The company originated less than \$100 million of those types of loans in the entire tax season a vear earlier. Investors in Meta have benefited from its growth, as its stock has more than doubled in value in the past vear.

"We want to offer products that bring value to consumers. It only helps to reduce the number of payday loans or predatory loans that exist in the market," said Brad Hanson, president of Meta, which operates MetaBank with its \$4.2 billion of assets.

MetaBank enters deals with tax preparers to originate and fund advance loans and provide the back-end systems to support the loans. Tax preparers, which already handle marketing the products to customers, cover loan-origination fees and limited guarantees to cover potential loan losses.

Liberty Tax Chief Executive John Hewitt told analysts Wednesday that its increase in advance loans was "right in line with our expectations." The company added more heft to its product in 2017, doubling the total loan advance amount available to filers to as much as \$1.300.

So far this tax season, the average taxpayer refund is \$3,138, up 0.7% from 2016, according to IRS data.

lawsuit from Alphabet Inc. alleging the theft of trade secrets, and a video leak showing Chief Executive Travis Kalanick berating a driver. The company says a union

could threaten drivers' freedom and has suggested it may leave Seattle if a union forms. Union advocates say it would deliver more consistent wages and working conditions, and help prevent Uber and Lyft from implementing sudden fare changes or shutting off drivers' apps.

While the National Labor Relations Act only grants employees, not independent contractors, the right to negotiate a collective-bargaining agreement, an organized group in Seattle could threaten mass work stoppages or other actions. Drivers have tried unsuccessfully in court to combat their freelance status, though a group in New York City has formed a union-backed affilia-

tion and some drivers in Phila-

Uber says unions can threaten drivers' freedom. A New York protest.

delphia this month linked with the Communications Workers of America to solicit better wages from Uber.

Teamsters organizers in the San Francisco Bay Area say they are closely watching Seattle for lessons that could be applied to Uber's hometown, one

of its largest global markets.

Seattle also is a crucial test case for millions of so-called gig economy workers who make deliveries, run errands and perform other freelance tasks as contractors. Uber and startups like delivery company Postmates Inc. and errands service TaskRabbit Inc. have withstood pressure to treat

ployees, thereby avoiding payment of full benefits or compensation for expenses like gasoline. Uber sued Seattle in January to block the ordinance.

their contract workers as em-

taking issue with rules dictating which drivers could vote to join a union. To do so, drivers must have completed 52 trips starting or ending in Seattle over a three-month period during the past year. Uber says it wants a more representative vote. More of its occasional drivers, who prefer the flexibility of working when they want, are less likely than fulltime drivers to support a union, the company's thinking goes. The Teamsters say they have no plans to negotiate

fixed schedules for drivers. A hearing on the suit is expected later this month. If the court allows the ordinance to proceed, Seattle's Uber and Lyft drivers could vote to form a union as soon as this summer.

### **UBER**

Continued from the prior page a near-constant stream of lawsuits challenging the classification as nonemployees.

A Seattle ordinance passed in 2015 took effect in January giving drivers the right to vote to organize, meaning some 10,000 Uber contractors could win the right to negotiate fares and benefits. The dispute has taken on added urgency in recent days as the Teamsters seek access to driver contact information from Uber and rival Lyft Inc. to help with organizing efforts, even as lawsuits challenging the ordinance roll in, including from the U.S. Chamber of Commerce and a group of 11 drivers backed by the National Right to Work Committee.

Meanwhile, Uber has been buffeted by sexual-harassment claims by a former engineer, a

### JOURNAL REPORT | WORKPLACE TECHNOLOGY

### How Do You Make a Data Scientist? Not Easily.

Having a facility with numbers helps. But that's only a small part of the equation.

BY DEBORAH GAGE

THE PATH TO becoming a data scientist is not a clear one. And that's by design.

Consider the data-science team at Alpine Data, a San Francisco software startup that helps companies analyze their data to make predictions about their businesses. It includes a former marketing manager, a former physicist, a former operations researcher and a former business consultant. Helping the team as well is a former mathematician who was hired as a software engineer.

"We strongly believe that having people from different backgrounds collaborating around a problem is more important than selecting some fancy algorithms," says Alpine co-founder Steven Hillion.

# One test: Can a job candidate pick out the most interesting data?

In other words, despite its name, data science isn't just about being skilled with numbers. Rather, an effective data scientist also has an ability to see how particular subsets of data may be more useful than others, and what conclusions can be drawn from them.

The term data science didn't even emerge until about 2008, when it was becoming clear that the volume of data being accumulated was beyond the capacity of humans to analyze or comprehend without a machine's help. The ability to analyze billions of rows of data with hundreds of thousands of variables opened new frontiers in environmental science.

medicine, politics, history and dozens of other fields.

#### **Human factors**

But as the oceans of data have grown, so has the need for people who can understand statistics and machine learning, work with complex data sets and software, and explain it all to customers.

Mr. Hillion, who has a Ph.D. in mathematics, says he saw the need for data scientists at his previous company, Greenplum, now part of EMC Corp., and had to develop techniques for creating them because there weren't enough people who could do the job. He uses the same methods at Alpine.

One test, he says, is whether a job candidate, given a choice of data sets, can pick out and work with the most interesting one. The test he designed at Alpine, for example, includes a set of New York Police Department data on motor-vehicle collisions in New York City that can be subdivided in several ways—by number and types of vehicles and drivers, number and types of injuries and deaths, contributing causes and several types of locations. Alpine Lead Data Scientist T.J. Bay, who made the data part of the test, says it stood out to him because of the number of interesting fields that could be used to help visualize and predict accidents.

It's a particularly good test for a data scientist, Mr. Hillion says, because "it was literally, in a tech sense, multidimensional. You can break it down by geography, time, vehicle type, accident type, driver characteristics and so on. And there's no one aspect of it that is obviously a path you should go down." Also, he says, the results are something everybody's interested in—how to avoid accidents.

Every Friday, team members explain their projects and give



npine data co-founder Steven Million (left, with 1.3. day), values data scientists diverse skills.

one another feedback. Given all the skills a data scientist needs, Mr. Hillion says, "you can't have all that in one person."

#### Studying accidents

Once Alpine participated in a challenge to analyze several years of U.S. traffic accident data to better understand trends in and causes of serious accidents. Lead Data Scientist Emilie de Longueau pored over the data and isolated variables to analyze, visualize and ultimately predict the severity of injuries and accidents.

But Mr. Hillion thought her visualizations were "a little dull," he says, so he asked the other members of the team to look again at the data. While one engineer focused on Ms. de Longueau's visualizations, another asked her to explain in detail why she chose certain data and how she made her predictions.

He suggested using a new algorithm he'd devised. When the analysis was complete, two product managers—whose focus is to translate technical into business concepts—then used it to create an easy-to-use Web application. The app gives users a forecasting tool for estimating rates and sever-

ity of traffic accidents based on variables such as rates of drunken driving or speeding. The finished product, Mr.

Hillion says, "created a way to take the machine learning [that was first applied to the data] and make it usable by the average person."

To achieve such insights, Mr. Hillion says he hires peo-

To achieve such insights, Mr. Hillion says he hires people who can design algorithms, people who can write code to make the algorithms work on different computer systems, and people who can apply those algorithms to customers' data and then explain what they've done. That last set of skills Mr. Hillion refers to as "the human layer."

Another essential skill-

Another essential skill: knowledge of an industry. Alpine Senior Data Scientist Anshuman Mishra, who is researching how a financial-services company can detect money laundering and fraud, is a former derivatives trader, while Ms. de Longueau, who has a master's in engineering in operations research, is working on supply-chain and workforce management.

#### Wall Street science

Big companies with deep pockets—and lots of data—of-

ten have their own data-science experts. Jeff McMillan, the chief analytics officer at Morgan Stanley, oversees about 45 people as part of a multiyear project to get more data more quickly to the firm's financial analysts and ultimately to Morgan Stanley's customers so they can make better investing decisions.

Mr. McMillan supervises separate teams of statisticians and data-visualization experts, along with a team of data scientists who work on predicting in real time the next best actions for customers.

"We're trying to deliver ad-

vice to customers in real time," he says. "Where's the portfolio relative to the goals...and when was the last time you spoke to the customer? Nobody wants the portfolio that everybody else has."

He also supervises artificialintelligence experts who are building expert systems that could "know the answer to every financial-services question," and a group of analytics managers who connect the quantitative and the business people so questions and information can be transferred faster.

"We're all going to be data scientists, just to different degrees," Mr. McMillan says. "Really what I'm focused on is connecting the science with the practice."

#### Universities get involved

Helping aspiring data scientists forge their own career paths, more universities are offering programs in data science or analytics.

The University of California, Berkeley, is in its second year of a program to make data-science classes available to all undergraduates. So far, about 1,200 students from 60 majors have enrolled.

So-called connector courses are available that help them apply data-science techniques to specific areas, such as environmental engineering. An ethics class is taught as well, so students can think about "the boundaries that could be crossed if data is not used responsibly," says Cathryn Carson, an associate professor of history.

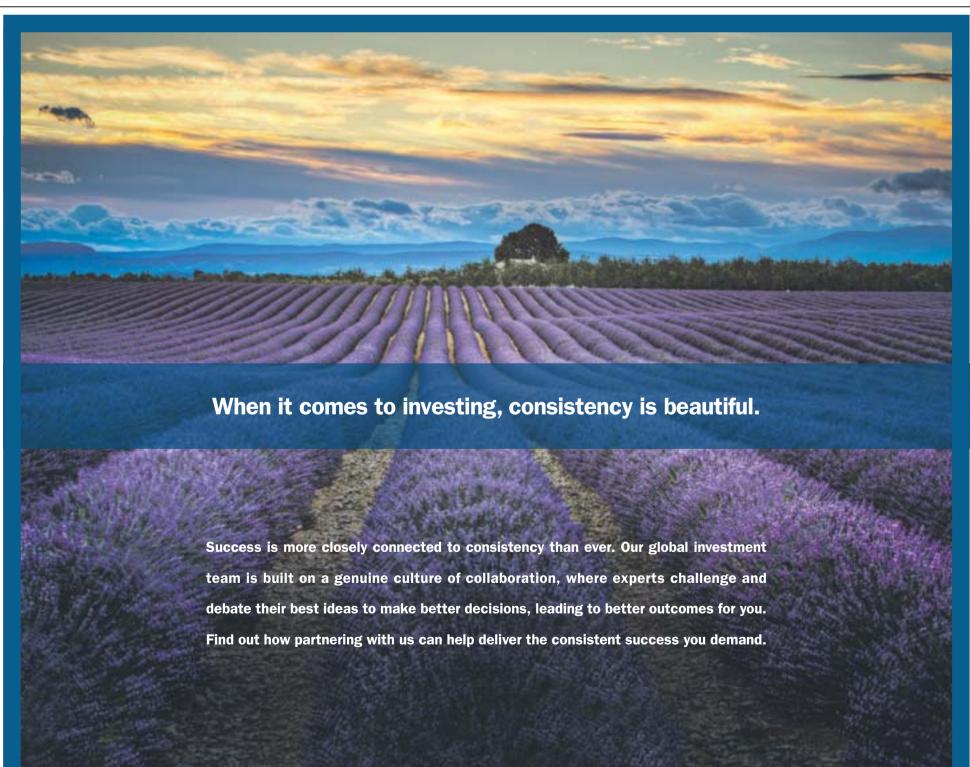
Berkeley is trying to bring students in other fields, and from underrepresented and underprivileged groups, into data science because they bring diverse perspectives, Dr. Carson says. An anthropology major, for instance, "will think deeply about the social contexts and human contexts that gave rise to the data," she says. "What kinds of questions were prompted to generate this data? Were those good questions or biased questions?" Interest from public-health

students at Berkeley drove a project to study data on child mortality in different countries. Some social-psychology students, meanwhile, want to study how humans react to mobile data collected about their health.

Dr. Carson says of such stu-

dents, "They're also appreciating the social good that can be done by working with examples of human welfare, rather than just data about Twitter."

Ms. Gage is a writer in San Jose, Calif. She can be reached at reports@wsj.com.





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# **Computers Stroll** Fashion's Runway

By Daniela Hernandez

Apparel seller Stitch Fix recently introduced a coral, sleeveless blouse with a split neckline-and an unusual creative provenance. It was one of three new tops designed with the help of artificial intelligence.

The e-commerce company. which sends customers boxes of preselected outfits, is leveraging computers to analyze purchasing behavior and learn what elements of style are popular. The software then recombines well-liked sleeve types, cuts and prints into new looks to "maximize" the odds a client "loves the resulting style," said Erin Boyle, a data scientist for Stitch Fix, which is based in San Francisco.

The three tops sold out as part of preselected boxes last year, according to the six-yearold company, and in February, it started selling nine more items designed with the help of computers, including dresses and tops. It plans to sell more than two dozen others by the end of the year. (AI-created styles are priced similarly to human designs, according to a company spokeswoman.)

The hybrid designs, as they are known inside Stitch Fix, are

industry to develop software that can be creative, and produce content such as songs, logos, videogames, clothing and special effects. The field of computational creativity dates back decades, but is flourishing thanks to advances in machine learning, plus increased access to data and computing power.

Alphabet Inc.'s Google, Adobe Systems Inc., Microsoft Corp., and Sony Corp. have active research projects related to computational creativity. Some, such as Adobe, have spent millions in this space. Tech companies and researchers hope that teaching computers to be creative could lead to more powerful AI systems.

Long term, the results could improve processes that require complex analysis, such as computer-vision systems in selfdriving cars, according to machine-learning experts. And some companies, such as Stitch Fix and Adobe, are already using such software to produce products.

One primary goal for tech firms is to create so-called general artificial intelligence—machines that excel at multiple tasks. Currently, AI systems are typically good at only one thing, such as categorizing ob-

part of a movement in the tech elects, and training the systems can require extensive help from humans. Today's smart systems also aren't very good at dealing with unpredictable situations, according to machine-learning experts.

To get machines to learn on their own, some companies are employing what's known as adversarial training, which pits two pieces of software against

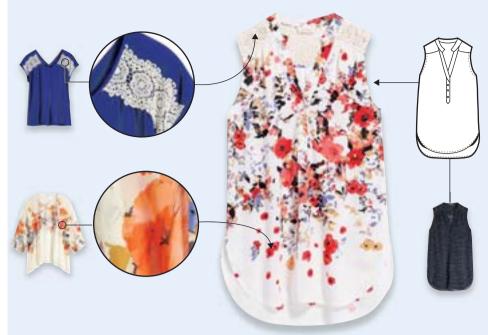
The Facebook AI Research lab recently used the technique-developed at the University of Montreal—to make computer-generated images of churches and faces, among others. Others have since used it to create nearly photo-realistic images of ants, birds, monasteries and volcanoes.

During adversarial training, one network tries to create images the other network can't tell were dreamed up by a computer. From their interactions, the generator learns to create images on its own that can pass for real-world pictures and the other network figures out what's real-and what's

Such training is "a way of handling the uncertainty in the world," according to FAIR chief Yann LeCun, who says such adversarial networks are the

#### Synthetic Aesthetic

Al can sort through thousands of clothing elements to create a winning look.



Source: Stitch Fix

THE WALL STREET JOURNAL.

"best idea" to come out of machine-learning research in the past decade.

Other techniques, such as that used by Stitch Fix, use algorithms to meld existing ideas into new combinations. Autodesk has spent the past seven years developing an AI system called Dreamcatcher that could be used in industrial design, according to Michael Berlin, a principal research scientist at the San Rafael, Calif., software company. The system creates designs after users enter certain performance desires, materials and the tooling available. Researchers at Autodesk

created a proof-of-concept car part that was about 35% lighter than the original that could be used to connect a vehicle chassis to the wheel. Autodesk has also used

Dreamcatcher to design a chair inspired by Hans J. Wegner's Elbow chair and is working with design company Hackrod to create a car. The Hackrod team aims to reveal the design to be 3-D printed later this year, according to Autodesk.

London-based startup Jukedeck has developed an AI that composes melodies. Logojoy, a Toronto-based online service that helps small businesses. freelancers and hobbyists create logos with the help of machine-learning software, has sold 3,000 logos, according to founder Dawson Whitfield.

Online, there is also an active community of hobbyists who experiment with various AI techniques to create art, ranging from computer-generated poetry in the style of T.S. Eliot to special effects that

mimic artists such as Pablo Picasso.

Despite the flurry of activity, AI experts think it could be years, if not decades, before software can create compelling and salable works of art or design without any human input.

At Stitch Fix, researchers hope their AI-assisted designs will "fill in the gaps" between what's commercially available and what customers tell Stitch Fix they want, according to Eric Colson, the company's chief algorithms officer. The software sifts through trillions of possible combinations of sleeves. patterns, cuts and necklines for blouses. Sometimes the predictions fall short, with mashups of patterns and colors, that while popular on their own, don't go well together or cuts that don't work with a certain fabric. That's when human de-

signers take over. The hybrid fashions themselves are a "tiny" part of the business, comprising "not even 1%" of products currently, Mr. Colson says, but they are ex-

panding.

—Tim Higgins contributed to this article.

#### **Human Touch** Still Key to Design

Artificial-intelligence software can miss creative mark, with commercial hits likely far off

Artificial intelligence has been flexing its creative muscles recently, making images, music, logos and other designs.

In most cases, though, humans are still very much a part of the design process. When

left to its own devices, AI software can create robotic or nonsensical things—or might miss the mark humans want to hit.

Researchers at Sony Corp.'s Computer Science Laboratory in Paris recently used AI to produce music in the styles of the Beatles and Johann Sebastian Bach. For instance, machines generated the melody and harmony of a vaguely Beatleesque song, entitled "Daddy's Car." Lyrics, however—"Down on the ground/ Lines leads me to Nowhere Man/ Please mother

drive me again in your car"—are the work of humans. The melodies are good

proofs-of-concepts, says CSL lab director François Pachet, but getting machines to create commercial hits autonomously is still years away. "Currently, there's no automated system that's even able to distinguish between a good song and a very, very good song," he said.

Mike Cook, a computationalcreativity researcher at Falmouth University in the U.K., is developing software that auto-

story plots based on a prompt Dr. Cook gives it. The more abstract the prompt is, the harder it is for the program, he said. Such results point to the

matically generates videogame

limits of AI, experts say. "It's very hard to change the outputs of these systems. They don't do what you want them to do," said Rebecca Fiebrink, a machine-learning researcher at Goldsmiths, University of London. They lack deep knowledge of the human creator's intentions and motivations, she said.

While mCent Browser is just launching in beta, Nathan Eagle, Jana's chief executive, says the prospect of free internet is extremely appealing to users in the developing world.

To date, Jana's core product has been an ad-powered payment system, also called mCent, on which its new browser depends. Basically, mCent pays for the airtime of users who watch ads or redeem promotions. Through relationships with 311 mobile operators in 90 countries, Jana is connected to the billing back-end of more than 4 billion mobile accounts and has leveraged that access for 30 million mCent payment users so far.

Mr. Eagle says he wants to bring a billion more people online. Google and Facebook have been working on the same problem, in part by launching balloons and drones to create airborne communication networks.

"The way we're trying to go about solving the free internet problem is a lot less sexy," says Mr. Eagle. But by leveraging existing mobile infrastructure, along with the desire of brands like Unilever, a client of Jana's, to reach customers in emerging markets, he argues his solution is more viable.

After all, which is more likely-getting another billion people online by flying cellular radios over their heads, or by making it more affordable to connect to cell towers that are already in range but whose cost is out of reach?

### MIMS

Continued from page B1 are racking up users nearly as fast as Facebook did in its highest-growth period. And they are figuring out how to keep their users occupied while monetizing them through mobile advertising.

Google, Facebook and other internet giants are well aware of these trends. Two-thirds of Facebook's users are in emerging markets, and while the company's Free Basics program—part of Internet.org —was banned in India for favoring some websites over others, it is available in many countries in Africa and South America. And Facebook says it has upward of 200 million users on

Facebook Lite, an app for low-bandwidth users.

As for Google, it benefits inherently from rapid global internet adoption, which would be impossible without Android. And while Google's mobile Chrome browser remains dominant in many emerging markets, it also pays Opera, among others, to direct search traffic to adsupported Google services.

It's logical that as people in emerging markets become wealthier and their mobile infrastructure becomes better, they'll follow the same trends as their richer peers, and their internet consumption will shift to apps. India. with its 1.3 billion people, is projected to increase its percapita income by 125% by 2025, according to Morgan Stanley.

But for the foreseeable future, Opera, UC Browser and Jana are all betting that the ranks of these "next billion" people coming onto the internet will continue to refresh themselves—and experience constraints that mobile browsers are uniquely capable of alleviat-

"In India, the raw growth numbers are just huge—it's both a lot more people coming online but also usage. because data is getting cheaper," says Nuno Sitima, an executive vice president and head of mobile business at Opera Software, founded in 1995 and based in Oslo, Norway; it was sold last year to a consortium of Chinese investors for \$575 million. In terms of new downloads. Africa is growing fastest, Mr.

Asia, with more than 600 million people, is another huge market for these browsers. For Alibaba, which ac-

Sitima says, while Southeast

quired UCWeb in 2014 for north of \$1.9 billion, UC

Google, Facebook and other internet giants are well aware of the trends.

Browser isn't just a browser, but a beachhead. The company is rolling out ways to make its browser sticky, like a sprawling, aggregationfueled news site in India. where it is the No. 1

#### **BUSINESS NEWS**

### Tesla Boss Offers Help for Australia 'Kong' Movie Makes

Elon Musk

By Robb M. Stewart

MELBOURNE, Australia-**Tesla** Inc.'s Elon Musk has set his sights on Australia, betting his company's battery technology can help solve the country's energy problems and save it from a repeat of the blackouts that struck households and businesses in the south for several days last year.

In a series of Twitter exchanges from his official account in recent days, the Tesla founder offered the company's energy-storage technology and said he had spoken to lawmakers including Prime Minister Malcolm Turnbull.

After a telephone conversation Sunday, in which Messrs. Musk and Turnbull agreed to remain in touch, the prime minister's office said they had discussed "the value of storage and the future of the electricity system.'

The day before, Mr. Musk tweeted he had spoken with Jay Weatherill, the premier of South Australia state. "Very impressed. Govt is clearly committed to a smart, quick solution," the tweet said. The premier said in a written statement that a

conversation about a battery proposal had been positive.

Mr. Musk responded on Twitter on Friday to Australian software entrepreneur Mike Cannon-Brookes, co-chief executive of Atlassian Corp., saying he was serious about supplying storage systems to South Australia. The state relies on solar and

wind generation for about 40% of its electricity, a higher proportion than any other Australian state. Tesla will get the

system installed and working 100 days from contract signature or it is free," Mr. Musk's tweet said. In a later tweet, he said Tesla could supply batteries at a price of per kilowatt-South Australia

was hit by a statewide blackout in Sep-

tember after a storm knocked out the transmission system. That led to criticism from Mr. Turnbull and his right-of-center government about the rapid adoption of renewable energy and a turn away from the coal-fired and natural-gas power plants that supply much of Australia's electricity.

On Thursday, the Australian Energy Market Operator pro-The phone calls came after jected a shortfall in gas-power electricity generation in the southeastern states as early as next summer if no action is taken. Mr. Turnbull said in a

speech the same day that Australia was losing a competitive advantage underpinned by affordable, reliable energy. Electricity prices for families had doubled over the past decade, and for industrial users had outpaced inflation by

a factor of three between 2002 and 2013, Mr. Turnbull said. "Policy makers

have put ideology and politics ahead of engineering and economics, introducing large amounts of variable energy-wind and solar, in particular without the necessary storage and additional

transmission infrastructure," he

Energy storage is a small but budding business for Tesla, which makes the bulk of its revenue from selling electric cars. Tesla launched its battery business in 2015, believing it could apply the same ingredients in batteries used in its cars to battery packs that store energy for homes, businesses and utilities.

Tesla's "gigafactory" near Reno, Nev., mostly produces lithium-ion batteries for Tesla automobiles, but a share of the plant's capacity is allocated to battery packs. The company sells both heavy-duty batteries, called Powerpacks, to utilities and companies that supply utilities with energy, and smaller battery packs, called Powerwalls, for homes. Mr. Musk had estimated

revenue from energy storage would grow to as much as \$500 million in 2016. But revenue in its energy businesswhich includes both storage and solar-energy systems from SolarCity Corp., acquired by Tesla last year—totaled under \$200 million for the year. Australia wouldn't be the

first such large-scale batterystorage project that Tesla has built quickly. In January, the company unveiled hundreds of refrigerator-size battery packs in Southern California as part of a project to save electricity in the power grid during energy shortages. In just three months, Tesla installed and connected the packs, which can power up to 15,000 homes over four hours, to a Southern

-Cassandra Sweet contributed to this article. come, when spring vacation

California Edison substation.

# Debut at \$61 Million

By Erich Schwartzel

"Kong: Skull Island" made a muscular \$61 million debut at the North American box office over the weekend, but the monster movie will nonetheless need to sustain momentum to reach profitability. "Kong," released by Time

Warner Inc.'s Warner Bros., grossed an estimated \$81.6 million overseas. The month of March has only

recently become a time for studios to release would-be blockbusters. But "Kong's" costly \$185 million production budget means even its No. 1 opening may not guarantee hit status.

Starring Brie Larson and Samuel L. Jackson, "Kong" places the iconic ape in the 1970s, as a group of scientists and soldiers travel to a Pacific island and find Kong and other creatures.

The movie performed better than expected as the weekend went on, said Jeff Goldstein,

Warner's president of domestic distribution. "That speaks to the word-of-mouth," he said. Solid reviews should help the movie in the weeks to gets young moviegoers out of the house, he added. It will face stiff competition next weekend, when Walt Disney Co.'s "Beauty and the Beast" is expected to open to more than \$120 million.

Warner Bros. has a lot riding on the "Kong" reboot. A sequel, "Godzilla vs. Kong," is already scheduled for release in 2020. Like many studio offerings

these days, the movie was backed by Chinese investors. Legendary Entertainment,

which is owned by China's Dalian Wanda Group Co., produced the movie. Chinese media conglomerate Tencent Holdings Ltd. took a minority stake in the production, and Chinese star Jing Tian has a minor role. "Kong" will open in China on March 24.

"Kong" faced little competition from new releases. That left the superhero drama "Logan" in second place, collecting \$37.9 million for a robust two-week total of \$152.7 million. The hit horror satire "Get Out" continued to pull in audiences in its third week, adding \$21.1 million for a cumulative gross of \$111.1 million.

## U.S. Rejects a Trading Fund for Bitcoin

AND PAUL VIGNA

The U.S. Securities and Exchange Commission denied an application for the first exchange-traded fund that would track the price of bitcoin, a high-profile rejection for the digital currency and the Winklevoss brothers behind the proposal.

Cameron and Tyler Winklevoss and their Winklevoss Bitcoin Trust first applied for approval of the product nearly four years ago. The bitcoin industry had been hoping an exchange-traded product would make the currency attractive to Wall Street and retail investors. The denial sets that back, at least momentarily, and sent the price of bitcoin tumbling.

The price, which traded as high as \$1.326 on Friday in anticipation of a possible approval, plummeted to about \$1,069 on Friday, according to CoinDesk. By Sunday afternoon in New York, it was trading at \$1,226.

The SEC's judgment, posted in an order on the regulator's website, marks the end, for now, of a long and drawn-out odyssey to package bitcoin into an exchange-traded product that could create a broader investor base for the virtual currency. The shares would have traded under the symbol COIN on the Bats BZX Exchange, operated by CBOE Holdings Inc.. "We remain optimistic and

committed to bringing COIN to market, and look forward to continuing to work with the SEC staff," said Tyler Winklevoss, the chief financial officer of Digital Asset Services, LLC. "We began this journey almost four years ago, and are deter-



Tyler Winklevoss, right, with brother Cameron applied for an ETF.

mined to see it through."

The SEC provided two main reasons for the denial, both related to bitcoin itself and the markets in which it trades. That could mean other proposed bitcoin products will face the same objections.

Under the law, the exchange listing the bitcoin product—in this case, Bats-must have agreements with significant exchanges that monitor trading in the commodity. The SEC

said the only agreement Bats had was with the Gemini Exchange, which trades bitcoin, and that it didn't pass muster because it isn't sufficiently regulated.

Most bitcoin exchanges aren't regulated, and are spread across the globe from the U.S. to Europe to China. That means that Bats would simply be unable to enter into any kind of surveillance agreements with those exchanges that would satisfy the rules, the SEC said.

"We agree with the SEC that regulation and oversight are important to the health of any marketplace and the safety of all investors," Mr. Winklevoss said.

Bats declined to comment. "The SEC is essentially saying that until significant bitcoin markets are regulated, the listing exchange really can't address concerns about the potential for manipulative trading," said Michael Mundt, a partner at law firm Stradley Ronon Stevens & Young LLP who formerly regulated exchange-traded products at the

The decision comes at a time when SEC officials have voiced concern about the growing complexity of some exchange-traded products and how volatile they can be during market routs. Trading in hundreds of ETPs was halted during a wild trading session on Aug. 24, 2015, when the market value of their shares diverged widely from the underlying holdings.

Bats and CBOE could appeal a staff denial, and they also could rewrite the proposal based upon feedback that could make the product more acceptable to regulators.

### Monte dei Paschi Sets Loan-Sale Plan

By Giovanni Legorano

ROME-Banca Monte dei Paschi di Siena SpA, the Italian lender being rescued by the Italian government, approved a new business plan involving the sale of its entire portfolio of bad loans at a deep discount.

The plan largely hinges on the sale of its entire €28 billion (\$29.77 billion) bad-loan portfolio to one or more buvers. The Siena-based bank plans to sell the loans at an average of 25% of their face value, said a person familiar with the matter. The board approved the plan late Thursday.

The bank would transfer chunks of bad loans to one or more newly created firms controlled by an investment fund or another company that would manage them, the person said. Monte dei Paschi is still assessing whether it would own a minority stake in these firms.

Potential investors looking at Monte dei Paschi's portfolio include Lone Star Funds LP, **Fortress Investment Group** LLC and Allianz SE's Pacific Investment Management Co., the person said. Pimco declined to comment. Fortress and Lone Star didn't reply to requests for comment.

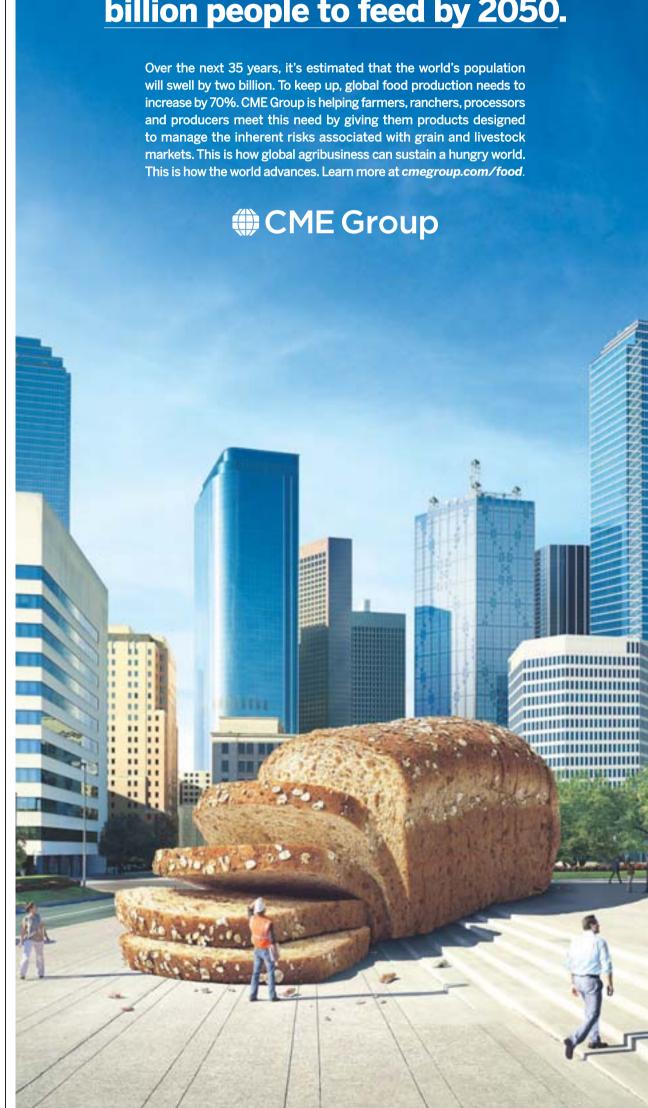
The plan commits to a similar cost-cutting program that the bank laid out last year, involving the elimination of about 2,600 jobs to lower personnel costs by roughly 9% in addition to the closure of 500 branches. With the new strategy, Monte dei Paschi hopes to secure European Union approval for an up to €9 billion injection of state aid. Monte dei Paschi declined to comment on the plan.

A resolution of the Monte dei Paschi saga would go a long way in stabilizing Italy's banking sector. The past several months have seen buyers come forward to acquire four banks rescued in 2015. Meanwhile, UniCredit SpA, Italy's biggest bank by assets, has just finished raising €13 billion in fresh capital, allowing it to clear €18 billion in bad debt off its books this year. Other smaller banks have also sold bad-loan portfolios in recent weeks.

The result: Italian banks may sell about €80 billion, or a more than a third of the total, in bad loans this year.

While the sector has stabilized, challenges remain. Even after moves to steady the sector, about 13% of total loans in Italy will be nonperforming, compared with an EU average

### There will be more than nine billion people to feed by 2050.



#### A Rarity: Fed, Markets See Eye-to-Eye on Rates Financial markets and the 2016, but again only lifted

Federal Reserve are finally speaking the same language on interest rates.

Friday's upbeat jobs report almost certainly means another rate increase at this week's Fed meeting, the first



of three that central-bank officials forecast over the course of the year. Investors had been skeptical about that pace. Now, they are no

longer fighting the Fed based on bets in the federal-fund futures market. That might explain why equity markets continue to take the prospect of higher interest rates in stride.

The S&P 500 is already up 6% this year and hovers around record highs. The conventional wisdom now holds that rising rates reflect policy makers' expectations of an improving economy as a result of fewer regulations, lower taxes and more infrastructure spending.

"Getting the federal-funds rate closer to normal isn't a death knell for risk assets anymore," says Jason Trennert, chairman and chief executive of Strategas Research Partners LLC. "The Fed has a long way to go to get from super accommodative to even just accommodative."

Wariness was to be expected. For years, the Fed over-promised in its quest to normalize monetary policy. The Fed started 2015 by projecting three rate increases, but only raised one time. It forecast four increases in

rates once. In both years, investors correctly bet the Fed would under-deliver on its projections.

Now, the Fed and investors are moving in sync. Fedfund futures show the odds of at least three rate increases this year have doubled over the past month, climbing to as high as 60% as of Friday, according to CME Group. Conversely, the odds of zero or one rate increase this year plummeted to 10%, from 36% in early February.

One thing that could derail this lovefest between markets and the Fed is the U.S. dollar. The greenback is already strong, having hit a 14-year high in December against trading partners' currencies. Higher rates make dollar assets more attractive, driving up the currency. A strong dollar can hurt earnings of multinational corporations, many of which do the bulk of their business abroad.

"If the dollar were to get much stronger from here, that would slow the Fed down," Mr. Trennert says.

But until then, the Fed might actually speed up. J.P. Morgan Chase economist Michael Feroli predicts the updated "dot plot" of individual Federal Open Market Committee members' predictions on Wednesday will show their median projection calling for four rate increases in 2017, up from three at the end of last year.

There are many things that could spook investors in the weeks and months ahead. So far, a tighter Fed doesn't seem to be one of

**2.56**%

38915.87 12/29/89

### **MARKETS DIGEST**

#### STOXX 600 Index

**373.23** ▲ 0.34, or 0.09% High, low, open and close for each trading day of the past three months.

Year-to-date ▲ 3.27% 52-wk high/low 375.69 308.75 414.06 4/15/15

#### S&P 500 Index

**2372.60 1**7.73, or 0.33% High, low, open and close for each trading day of the past three months.

Data as of 4 p.m. New York time Last Year ago Trailing P/E ratio 24.68 23.02 P/E estimate 18.27 16.72 Dividend yield 1.98

2395.96, 03/01/17

Year

low

357.50

high

387.25

London close on Mar 10

All-time high:

Data as of Friday, March 10, 2017



Year-to-date

All-time high

Latest NetChg

12.15

16.05

3.20

1.99

90.22

9.84

5.33

44.79

22.92

7.73

-0.64 -5.20

0.34

4.91

20.86

20.11

11.81

-15.21

-0.26

87.13

3.40

9.03

8.00

1.07

30.27

28.12

9.63

34.40

-3.99

67.11

17.10

286.03

14.51

6.29

% chg

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0.92

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Closed

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**1.48** 

0.47

0.30

-0.12

-0.32

480.83

47130.02

13266,44

44210.44

3054.30

17140.24

4594.44

2000.54

10.58

308.75

2636.71

1988.40

3141.13

3984.72

9268.66

519.33

25390.23

1382.34

15103.58

43549.58

411.62

821.64

7645.50

445.00

7593.20

48935.90

71594.98

5923.53

1315.32

4924.40

2806.91

19694.33

24551.17

14952.02

2729.85

1925.24

8053.69

Close

2668.51

1763.90

926.14

570.40

64675.46

15506.68

3463.41

20902.98

5861.73

2372.60

11.66

373.23

3101.36

2826.11

3764.65

4993.32

648.59

**32727.24** -259.62

**58316.11** 329.51

**51269.54** 358.83

11963.18

1439.21

19658.37

511.14

1055.93

10006.40

560.21

8669.97

89611.40

7343.08

1520.45

5775.60

3212.76

23568.67

28946.23

19604.61

3133.35

2097.35

**9627.89** -30.72

**47102.31** -161.61

52-wk high/low 19604.61 14952.02

380 370 360 350 65-day moving average 340 330

Feb.



#### International Stock Indexes

The Global Dow

**MSCIEAFE** 

MSCI EM USD

**DJ Americas** 

Sao Paulo Bovespa

**Nasdaq Composite** 

**CBOE** Volatility

Stoxx Europe 600 Stoxx Europe 50

S&P/TSX Comp

IPC All-Share

Santiago IPSA

DJIA

**ATX** 

Bel-20

CAC 40

DAX

BUX

**AEX** 

WIG

**Tel Aviv** 

**FTSE MIB** 

RTS Index

SX All Share

**FTSE 100** 

Asia-Pacific DJ Asia-Pacific TSM

Swiss Market

**S&P/ASX 200** 

S&P BSE Sensex

**Hang Seng** 

Weighted

**Shanghai Composite** 

Johannesburg All Share

**IBEX 35** 

S&P 500

Region/Country Index

World

**Americas** 

Brazil Canada

Mexico

Chile

U.S.

**EMEA** 

Austria

Belgium

France

Greece

Hungary

Israel

Italy Netherlands

Poland

Russia

Spain

Sweden

Turkey

Australia

Hong Kong

China

India

Taiwan

U.K.

Switzerland

South Africa

Germany

Nikkei 225 Index

**19604.61 \( \)** 286.03, or 1.48\%

High, low, open and close for each

trading day of the past three months.

#### 52-Week Range Low High 2197.91 2689.43 5.4 1520.94 1764.17 4.7 781.84 952.12 7.4

577.52

69052.03

15922.37

48694.90

3464.62

5904.03

2395.96

375.69

3116.91

2826.11

3764.65

12067.19

34324.99

• 19687.71

1502.66

511.14

59743.64

1195.61

563.92

8670.06

54474.09

91044.99

7382.90

1542.13

5816.30

3282.92

24201.96

29048.19

• 19604.61

3145.29

2107.63

9799.76

London close on March 10

**•** 10006.40

665.21

21115 55

5.6

7.4

1.4

7.5

5.8

8.9

6.0

3.0

7.9

4.4

4.2

0.8

2.3

-2.1

2.2

5.8

12.7

-8.4

7.0

4.8

1.2

14.7

2.8

6.9

3.5

7.1

8.7

2.6

8.8

3.5

25.76 -17.0

Data as of 4 p.m. New York time

### Global government bonds

320

Latest, month-ago and year-ago yields and spreads over or under U.S. Treasurys on benchmark two-year and 10-year government bonds around the world. Data as of 3 p.m. ET

		Country/			Spread Over Treas	surys, in basis points	. ——		— Yield —	
	Coupon	Maturity, in years	Yield	Latest	Previous	Month Ago	Year ago	Previous	Month ago	Year ago
	5.250	Australia 2	1.927	56.3	53.2	63.6	104.1	1.915	1.829	1.975
	4.750	10	2.989	40.5	33.0	29.5	66.7	2.940	2.704	2.601
	3.000	Belgium 2	<b>-0.49</b> 8	-186.1	-190.7	-175.3	-123.0	-0.525	-0.559	-0.295
	0.800	10	0.986	-159.8	-168.8	-153.9	-136.4	0.922	0.870	0.570
	0.000	France 2	-0.453	-181.6	-189.5	-173.0	-131.6	-0.512	-0.537	-0.381
	0.250	10	1.123	-146.1	-152.6	-136.9	-134.5	1.083	1.040	0.590
	0.000	Germany 2	-0.835	-219.9	-224.5	-198.8	-138.3	-0.862	-0.795	-0.448
	0.250	10	0.487	-209.7	-218.0	-209.0	-162.1	0.429	0.319	0.314
	0.300	Italy 2	0.022	-134.2	-139.1	-122.4	-97.6	-0.008	-0.030	-0.042
	1.250	10	2.368	-21.6	-29.9	-13.9	-49.1	2.310	2.270	1.443
	0.100	Japan 2	-0.262	-162.6	-164.7	-140.6	-110.3	-0.264	-0.213	-0.169
	0.100	10	0.090	-249.4	-251.9	-232.6	-195.2	0.090	0.083	-0.018
	4.000	Netherlands 2	-0.837	-220.1	-222.3	-191.0	-134.9	-0.840	-0.717	-0.415
	0.750	10	0.746	-183.8	-192.9	-189.4	-154.0	0.680	0.515	0.394
	4.450	Portugal 2	0.019	-134.4	-136.9	-120.3	-66.3	0.014	-0.010	0.271
	2.875	10	4.040	145.6	138.1	169.0	97.7	3.990	4.099	2.911
	2.750	Spain 2	-0.101	-146.5	-151.9	-146.8	-87.7	-0.136	-0.274	0.058
	1.500	10	1.866	-71.8	-80.6	-71.8	-32.4	1.804	1.691	1.610
	4.250	Sweden 2	-0.567	-193.0	-198.2	-175.7	-154.0	-0.600	-0.563	-0.605
	1.000	10	0.782	-180.2	-187.9	-176.4	-138.1	0.730	0.645	0.553
	1.750	<b>U.K.</b> 2	0.098	-126.6	-127.4	-109.3	-39.8	0.109	0.101	0.537
	4.250	10	1.235	-134.9	-138.2	-105.4	-39.4	1.227	1.355	1.541
_	1.125	<b>U.S.</b> 2	1.364					1.383	1.194	0.935
	2.250	10	2.584					2.609	2.409	1.934

Commodities Prices of futures contracts with the most open interest 3:30 p.m. New York time  $\textbf{EXCHANGE LEGEND: CBOT:} Chicago \ Board \ of \ Trade; \ \textbf{CME:} Chicago \ Mercantile \ Exchange; \ \textbf{ICE-US:} \ ICE \ Futures \ U.S.; \ \textbf{MDEX:} \ Bursa \ Malaysia \ Alaysia \ Alaysi$ Derivatives Berhad; TCE: Tokyo Commodity Exchange; COMEX: Commodity Exchange; LME: London Metal Exchange

-2.25

One-Day Change — Percentage

-0.61%

Commodity Exchange Last price Corn (cents/bu.) CBOT 364.75

NYMEX: New York Mercantile Exchange; ICE-EU: ICE Futures Europe. \*Data as of 3/9/2017

					0.00			
	Soybeans (cents/bu	) CBOT	1007.25	-3.75	-0.37		1,088.25	1,001.25
A CONTRACTOR OF THE PARTY OF TH	Wheat (cents/bu.)	CBOT	440.75	-3.25	-0.73		477.00	416.25
	Live cattle (cents/lb.	) CME	107.600	0.875		0.82%	109.625	103.150
	Cocoa (\$/ton)	ICE-US	1,931	33		1.74	2,273	1,869
	Coffee (cents/lb.)	ICE-US	141.55	1.10		0.78	159.30	136.70
	Sugar (cents/lb.)	ICE-US	18.30	0.30		1.67	21.21	17.96
	Cotton (cents/lb.)	ICE-US	77.29	-0.53	-0.68		79.46	71.55
	Robusta coffee (\$/tor	) ICE-EU	2171.00	-11.00	-0.50		2,279.00	2,093.00
	Copper (\$/lb.)	COMEX	2.5990	0.0190		0.74	2.8360	2.4800
-	Gold (\$/troy oz.)	COMEX	1203.80	0.60		0.05	1,264.90	1,149.70
	Silver (\$/troy oz.)	COMEX	17.020	-0.016	-0.09		18.540	16.000
/	Aluminum (\$/mt)*	LME	1,855.50	-33.50	-1.77		1,939.00	1,688.50
	Tin (\$/mt)*	LME	19,225.00	-200.00	-1.03		21,225.00	18,760.00
	Copper (\$/mt)*	LME	5,672.00	-126.00	-2.17		6,156.00	5,518.00
	Lead (\$/mt)*	LME	2,229.00	-16.00	-0.71		2,445.00	2,022.00
	Zinc (\$/mt)*	LME	2,665.00	-44.50	-1.64		2,958.50	2,555.00
	Nickel (\$/mt)*	LME	10,110.00	-480.00	-4.53		11,095.00	9,430.00
	Rubber (Y.01/ton)	TCE	261.70	4.70		1.83	n.a.	n.a.
	Palm oil (MYR/mt)	MDEX	2770.00	-69.00	-2.43		3,123.00	2,723.00
	Crude oil (\$/bbl.)	NYMEX	49.03	-0.80	-1.61		57.50	48.85
	NY Harbor ULSD (\$/gal	.) NYMEX	1.5065	-0.0230	-1.50		1.7752	1.5001
	RBOB gasoline (\$/gal	.) NYMEX	1.6138	-0.0286	-1.74		1.9065	1.6104
	Natural gas (\$/mmBtu	) NYMEX	3.092	0.046		1.51	3.5070	2.7370
	Brent crude (\$/bbl.)	ICE-EU	51.43	-0.76	-1.46		59.53	51.14

#### ICE-EU 456.50 -6.00 Sources: SIX Financial Information; WSJ Market Data Group

#### Nikkei Stock Avg Japan Singapore **Straits Times**

#### Source: SIX Financial Information; WSJ Market Data Group Currencies

Yen, euro vs. dollar; dollar vs. major U.S. trading partners 10 WSJ Dollar inde

10	
-20	
2016	
	US\$ vs.
	—— Fri — YTDchg
Country/currency	in US\$ per US\$ (%)
Americas	
Argentina peso-a	0.0646 15.4703 <b>-2.5</b>
Brazil real	0.3169 3.1556 <b>-3.1</b>
Canada dollar	0.7426 1.3466 <b>0.2</b>
Chile peso	0.001509 662.90 <b>-1.0</b>
Colombia peso	0.0003354 2981.56 <b>-0.7</b>
Ecuador US dollar-f	1 1 unch
Mexico peso-a	0.0509 19.6571 <b>-5.2</b>
Peru sol	0.3046 3.2835 <b>-2.1</b>
<b>Uruguay</b> peso-e	0.0351 28.500 <b>-2.9</b>
Venezuela bolivar	0.100050 10.00 <b>unch</b>
Asia-Pacific	
Australia dollar	0.7533 1.3275 -4.4
China yuan	0.1446 6.9163 <b>-0.4</b>

2X			
1 1	1 1		
	201	7	
			US\$v
	Fri		YTDch
Country/currency		er US\$	(%)
Hong Kong dollar	0.1288	7.7647	0.:
I <b>ndia</b> rupee	0.0150 6	6.5500	-2.
Indonesia rupiah	0.0000748	13368	-1.3
<b>Japan</b> yen	0.008694	115.03	-1.7
<b>Kazakhstan</b> tenge	0.003157	316.79	-5.
<b>Macau</b> pataca	0.1253	7.9791	0.8
<b>Malaysia</b> ringgit-c	0.2246	4.4515	-0.8
<b>New Zealand</b> dollar	0.6920	1.4451	0.:
Pakistan rupee	0.0095 1	L04.830	0.4
Philippines peso	0.0199	50.263	1.3
Singapore dollar	0.7073	1.4138	-2.3
South Korea won	0.0008683 1	L151.62	-4.7
<b>Sri Lanka</b> rupee	0.0066002	151.51	2.:
<b>Taiwan</b> dollar	0.03223	31.023	-4.4
Thailand baht	0.02828	35.360	-1.3

		US\$vs,
Fr	DOK 115¢	TID CNG
111022	per 05\$	(70)
0.1437	6.957	-3.0
1.2158	0.8225	1.5
a		
2.6526	0.3770	-0.05
0.0570	17.5545	-3.2
3.2702	0.3058	0.1
2.5970	0.3851	0.02
0.2666	3.7506	-0.003
0.0756	13.2223	-3.4
ose Net Cho	% Chg	YTD%Chg
	0.5450 0.1437 1.0668 0.0395 0.1435 0.003410 0.009267 0.1162 0.2459 0.01696 0.1110 0.9897 0.2674 0.0373 1.2158 2.6526 0.0570 0.2722 3.2702 2.5970 0.2726 0.27666 0.2756	0.5450 1.8348 0.1437 6.957 1.0668 0.9374 0.0395 25.330 0.1435 6.9688 0.003410 293.29 0.009267 107.91 0.1162 8.6027 0.2459 4.0662 0.01696 58.970 0.1110 9.0127 0.9897 1.0114 0.2674 3.7393 0.0373 26.8255 1.2158 0.8225 2.2158 0.8225 2.2158 0.8225 0.2722 3.6733 3.2702 0.3058 2.5970 0.3851 0.2746 3.641 0.2666 3.7560 0.0756 13.2223 0.058 2.5970 0.3851 0.2746 3.641 0.2666 3.7560 0.0756 13.2223 0.058 NetChg %Chg

**WSJ Dollar Index** 91.85 -0.32 -0.34 **-1.17** 

Cross rates										
	USD	GBP	CHF							
Australia	1.3275	1.6144	1.3139							
Canada	1.3466	1.6373	1.3328							
Euro	0.9374	1.1398	0.9279							
Hong Kong	7.7647	9.4409	7.6840							
•	115 0070	120 0500	112 0200							

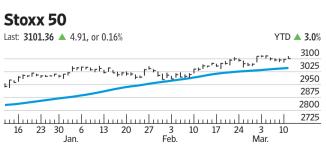
Gas oil (\$/ton)

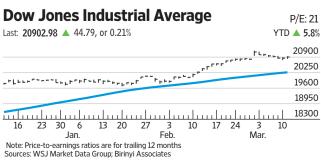
	USD	GBP	CHF	JPY	HKD	EUR	CDN	AUD			
Australia	1.3275	1.6144	1.3139	0.0115	0.1710	1.4161	0.9861				
Canada	1.3466	1.6373	1.3328	0.0117	0.1734	1.4363		1.0142			
Euro	0.9374	1.1398	0.9279	0.0081	0.1207		0.6962	0.7060			
Hong Kong	7.7647	9.4409	7.6840	0.0675		8.2821	5.7658	5.8491			
Japan	115.0270	139.8500	113.8300		14.8130	122.6900	85.4100	86.6300			
Switzerland	1.0104	1.2286		0.0088	0.1301	1.0778	0.7503	0.7611			
J.K.	0.8225		0.8139	0.0072	0.1059	0.8774	0.6108	0.6194			
J.S.		1.2158	0.9897	0.0087	0.1288	1.0668	0.7426	0.7533			
							Source: Tul	llett Prebon			

	Latest	52 wks ago					%	YTD%					%	YTD%	ı				%	YTD%
Libor			Cur	Stock	Sym	Last	Chg	Chg	Cur	Stock	Sym	Last	Chg	Chg	Cur	Stock	Sym	Last	Chg	Chg
One month	0.89056%	0.43620%		Α -					¥	TakedaPharm	4502	5298.00	1.38	9.58	£	RovDtchShell A	RDSA	2113.50	1.15	-5.75
Three month	1.12122	0.63385		AS	ia II	itans			HK\$	TencentHoldings	0700	212.40	1.24	11.97	€	SAP	SAP	89.03	-0.53	7.51
Six month	1.42600	0.90550	HK\$	AlAGroup	1299	50.30	1.41	14.97	¥	TokioMarineHldg		5075.00	2.75	5.82	€	Sanofi	SAN	82.24	-0.10	6.94
One year	1.81844	1.22450	¥	AstellasPharma	4503	1560.50	1.30	-3.88	¥	TovotaMtr	7203	6520.00	1.34	-5.21	€	SchneiderElectric		65.26	1.16	-1.29
Euro Libor				AustNZBk	ANZ	31.95	1.01	5.03	AU\$	Wesfarmers	WES	44.41	1.72	5.39	€	Siemens	SIE	123.05	-0.81	5.35
One month	-0.39357%	-0.30100%	AU\$		BHP	23.67	-1.21	-5.55	AU\$	WestpacBanking		35.13	0.26	7.76	CHF	Syngenta	SYNN	442.20	-0.23	9.86
Three month	-0.35429	-0.23571	HK\$		3988	3.78	1.61	9.88		Woolworths	wow	26.42	1.34	9.63	€	Telefonica	TEF	10.35	0.29	17.29
Six month	-0.24514	-0.12371	HK\$	CKHutchison	0001	95.65	0.16	8.82	ΑUŞ				1.54	7.03	€	Total	FP	47.27	1.02	-2.99
One year	-0.11100	-0.00543	HK\$		0883	8.83	-0.67	-8.97		S	toxx	50			CHF	UBSGroup	UBSG	16.17	0.37	1.38
Euribor			AU\$		CSL	125.91	2.65	25.40					0.40	5.01	€	Unilever	UNA	45.88	0.53	17.28
One month	-0.37200%	-0.30100%	¥	Canon	7751	3473.00	1.37	5.40		ABB	ABBN	22.75	0.49	5.91	£	Unilever	ULVR	4035.50	0.82	22.57
Three month	-0.32900	-0.22500	¥	CentralJapanRwy		18455	0.82	-4.03	€	ASMLHolding	ASML	116.60	1.57	9.33	€	Vinci	DG	70.34	-0.57	8.72
Six month	-0.24100	-0.13100	HK\$	ChinaConstructnBk		6.05	-0.17	1.34	€	AXA	cs	23.92	-0.37	-0.27	£	VodafoneGroup	VOD	203.85	0.22	2.00
One year	-0.10900	-0.00900	HK\$	ChinaLifeInsurance		23.45	0.21	16.09	€	AirLiquide	AI	102.30		-3.17	CHF	Zurichlnsurance	ZURN	282.70	0.28	0.82
Yen Libor			HK\$	ChinaMobile	0941	84.40	-0.24	2.68	€	Allianz	ALV	169.15	-0.50	7.74			ВШ	Α		
One month	-0.06129%	-0.02843%	HK\$			5.80	-1.53	5.45	€	ABInBev	ABI	100.70	0.30	0.15			ILD	A		
Three month	-0.01214	0.00100	AU\$		CBA	84.50	1.16	2.54	£	AstraZeneca	AZN	4759.50	-0.10	7.26	\$	AmericanExpress	ΔΧΡ	79.38	0.10	7.15
Six month	0.02429	0.01407	¥	EastJapanRailway		10035	1.51	-0.64	-	BASF	BAS	89.30	-1.03	1.12	\$	Apple	AAPL	139.14	0.33	20.13
One vear	0.12757	0.10357	¥	Fanuc	6954	22320	1.73	12.64	€	BNP Paribas	BNP	61.86	1.76	2.16	\$	Boeing	BA	178.70	-1.04	14.79
one year	Offer	Bid	¥	Hitachi	6501	630.00	-0.28	-0.32	£	BT Group	BT.A	342.45	3.71	-6.66	\$	Caterpillar	CAT	92.31	1.01	-0.46
	Offer	DIU	TW\$		2317	89.90	0.67	6.77	€	BancoBilVizAr	BBVA	6.89	0.16	7.45	\$	Chevron	CVX	110.61	0.52	-6.02
Eurodollars	0.05000/	0.8500%	¥	HondaMotor	7267	3595.00	1.50	5.27	€	BancoSantander	SAN	5.49	0.31	10.71	\$	CiscoSystems	CSCO	34.26	0.56	13.37
One month	0.9500% 1.2000			HyundaiMtr	005380		0.69		£	Barclays	BARC	231.85	-0.15	3.76	\$	Coca-Cola	ко	42.29	0.62	2.00
Three month	1.2000	1.1000	HK\$	Ind&Comml	1398	4.91	-0.41	5.59	€ £	Bayer BP	BAYN BP.	106.75	0.85	7.69	\$	Disney	DIS	110.92	-0.10	6.43
Six month	1.7500	1.2500 1.6500	¥	JapanTobacco	2914	3804.00	1.30	-1.04	£		BP. BATS	470.70	3.68	-7.63	\$	DuPont	DD	80.86	0.47	10.16
One year			¥	KDDI	9433	2985.50	0.81	0.88	£	BritishAmTob	DAI	5108.00	0.16	10.53	\$	ExxonMobil	XOM	81.61	-0.07	-9.58
	Latest	52 wks ago	¥	Mitsubishi	8058	2506.50	-0.22	0.66	€	Daimler	DTE	70.00 16.08	0.04	-1.02	\$	GeneralElec	GE	30.28	2.09	-4.18
Prime rates			¥	MitsubishiElectric		1696.00	1.47	4.08	£	DeutscheTelekom	DIE		0.06	-1.68	\$	GoldmanSachs	GS	248.38	-0.72	3.73
U.S.	3.75%	3.50%	¥	MitsubishiUFJFin		769.60	1.68	6.86	£	Diageo ENI	ENI	2269.00	0.60	7.54	\$	HomeDepot	HD	146.85	0.16	9.52
Canada	2.70	2.70	¥	Mitsui	8031	1695.00	-0.12	5.48	£	GlaxoSmithKline	GSK	14.63 1672.50	-0.48 0.06	-5.43	\$	Intel	INTC	35.91	0.25	-0.99
Japan	1.475	1.475	¥	Mizuho Fin	8411	214.10	1.33	2.05	£	HSBC Hldas	HSBA	666.70	-0.13	7.07	\$	IBM	IBM	177.83	0.37	7.13
Hong Kong	5.00	5.00	¥	NTTDoCoMo	9437	2678.00	0.11	0.56	€	INGGroep	INGA	14.62	2.02	1.49	\$		JPM	91.28	-0.32	5.78
Policy rates			AU\$		NAB	33.16	0.88	8.12	£	ImperialBrands	IMB	3847.50	0.69	9.35 8.61	\$	T&T	TNT	126.21	0.21	9.55
ECB	0.00%	0.05%	¥	NipponTeleg	9432	4897.00	0.16	-0.31	£	IntesaSanpaolo	ISP	2.43	1.76	0.25	\$	McDonalds	MCD	127.98	-0.12	5.14
Britain	0.25	0.50	¥	NissanMotor	7201	1158.00	1.45	-1.49	€		MC	196.40	0.38	8.27	\$	Merck	MRK	65.60	-0.44	11.43
Switzerland	0.50	0.50	¥	Panasonic	6752	1284.50	1.26	7.99	f	LlovdsBankingGroup		68.76			\$	Microsoft	MSFT	64.93	0.31	4.49
Australia	1.50	2.00	# HK\$			41.45		6.83	£	LOreal	OR	177.35	0.31	10.00 2.28	\$	Nike	NKE	56.43	0.12	11.02
U.S. discount	1.25	1.00	\$	RelianceIndsGDR		37.70	-0.92	19.49	£	NationalGrid	NG.	978.70	-0.17	2.28	\$	Pfizer	PFE	34.11	0.18	5.02
Fed-funds target	0.50	0.25	KRW				-0.92	11.49	CHF	NationalGrid	NG. NESN	75.45	0.17	3.29	\$			91.07	0.81	8.31
Call money	2.50	2.25	¥	Seven&I Hldgs	3382	4370.00	1.39	-1.86	CHF	Novartis	NOVN	75.45 76.10	0.27	2.70	\$	3M	MMM	191.21	0.69	7.08
Overnight repurch	nase rates		¥	SoftBankGroup	9984	8365.00	0.44	7.73	DKK	NovoNordiskB	NOVN NOVO-B	235.40	0.99	-7.58	\$	Travelers	TRV	122.83	0.76	0.33
U.S.	0.55%	0.45%	¥	Sonv	6758	3661.00	3.65	11.79	£	Prudential	PRU	1643.50	-0.36	0.98	-	UnitedTech	UTX	112.14 169.98	0.19	2.30
Euro zone	n.a.	n.a.	¥	Sumitomo Mitsui		4395.00	1.60	-1.46	£	ReckittBenckiser	RB.	7321.00	0.36	6.32	\$	UnitedHealth	UNH V		1.17	6.21
			# HK\$		0016	113.50	0.80	15.82	£	RioTinto	RIO	3178.50	-0.75	0.52	\$	Visa Verizon	v VZ	89.73 49.35	0.70	15.01 -7.55
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### 4 p.m. New York time







## Small Investors Wade In as Stocks Soar

People who have been agers by Bank of America Merwary of U.S. shares since crisis now worry about missing out

By Aaron Kuriloff AND DAISY MAXEY

The stock-market rally presents a difficult choice for some individual investors: Miss out or risk getting in at the top.

The scars of the financial crisis have left many wary, even as the second-longest bull run in S&P 500 history has added more than \$14 trillion in value to the index since it bottomed in March 2009, according to S&P Dow Jones Indices. Yet there are signs that caution is dissipating.

Investors have poured money into stocks through mutual funds and exchange-traded funds in 2017, with global equity funds posting record net inflows in the week ended March 1 based on data going back to 2000, according to fund tracker EPFR Global. Inflows continued the following week, even as the rally slowed. The S&P 500 shed 0.4% in the week ended Friday.

The investors' positioning suggests burgeoning optimism, with TD Ameritrade clients increasing their net exposure to stocks in February, buying bank shares and popular stocks such as Ama**zon.com** Inc. and sending the retail brokerage's Investor Movement Index to a fresh high in data going back to 2010. The index tracks investors' exposure to stocks and bonds to gauge their sentiment

"People went toe in the water, knee in the water and now many are probably above the waist for the first time," said JJ Kinahan, chief market strategist at TD Ameritrade.

That brings individual investors increasingly in line with Wall Street professionals. A February survey of fund manrill Lynch found optimism about the global economy improving while investors were holding above-average levels of cash, leaving room for them to drive stocks still higher. Bullishness among Wall Street newsletter writers reached 63.1%—the highest level since 1987—a week ago in a survey by Investors Intelligence, before falling to 57.7% this past week.

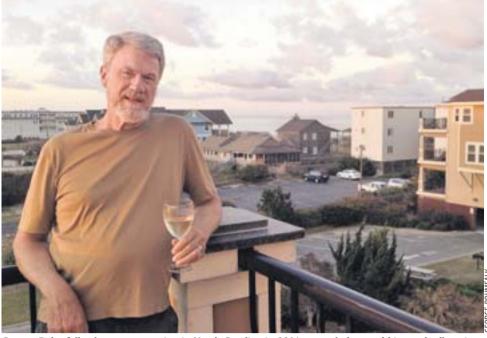
Overall investor sentiment is strong right now for the U.S. stock market, said Ann Gugle, principal at Alpha Financial Advisors LLC, in Charlotte, N.C., which manages \$155 million in clients' assets. She pointed to a typical growth-and-income portfolio with 70% in stocks and 30% in bonds and alternatives. The 70% allocation to stocks, she said, would ordinarily be evenly split between U.S. and international stocks, but for the past three years it has shifted about 40% to U.S. stocks and 30% international.

One of Ms. Gugle's clients has increased his stock allocation to around 80% from 70% in recent months after cutting back on bonds amid concerns about low returns.

The client, George Bohmfalk, a 69-year-old retired neurosurgeon in Charlotte, said he has faith that remaining loyal to a low-cost passively managed portfolio is more productive than trying to pick winners and losers. But he is concerned about what the Trump administration may do, and he worries about U.S. stocks' lofty valuations. "What do you do? If you

take your investment out and stocks go up another 1,000 [points], you're going to be pretty miffed," he said. "I'm slightly concerned that there might be a pullback, but I'm not losing sleep over it."

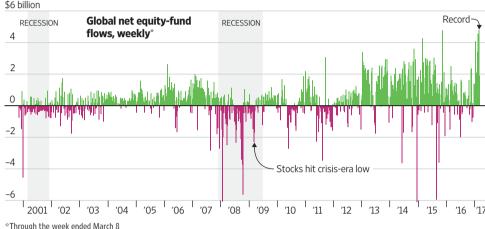
A combination of factors has helped shake individual investors from their torpor, according to analysts and money managers. U.S. economic data have



George Bohmfalk, shown on vacation in North Carolina in 2016, recently boosted his stock allocation.

#### Piling In

Investors are returning to stocks, pushing flows into mutual funds and exchange-traded funds to the highest level on record.



Source: EPFR Global

improved in fits and starts, boosting optimism among consumers and businesses. At the same time, stocks' persistent rise in the wake of the U.S. presidential election has pulled in investors who are fearful of missing out on big gains.

"It feels like this is a hated

rally, because people are underinvested, and they're just catching up," said Matthew Peron. head of global equities at Northern Trust Asset Management.

The S&P 500 trades at roughly 22 times its past 12 months of earnings, according to FactSet, above its 10-year

THE WALL STREET JOURNAL.

average of around 16 times U.S. economic earnings. growth, while on the uptrend, has recently been sluggish in key areas such as wage growth—despite data showing firming in Friday's jobs report—and business investment.

The improving attitude isn't

at the extremes that some analysts consider a warning sign that optimism has gone too far. About 38% of investors were bullish at the start of March, according to the American Association of Individual Investors, about average for the survey that polls roughly 350 people a week, and down from a postelection high of 50% hit on Nov. 24.

Another retiree, Peter Gallavin, 72, of Grand Rapids, Mich., said that while he is concerned about President Donald Trump and what his policies may do to the market, he is still investing in U.S. stocks through mutual funds.

"I can't imagine anyone who isn't concerned" about the stock market, said Mr. Gallavin. "Just the general uncertainty about what the new administration is going to do causes me concern.'

But Mr. Gallavin, who previously worked for General Motors Co. and as regional personnel director at Delphi Corp., said those concerns haven't led him to alter his investments. Retired for 10 years, he has about 60% of his portfolio in mostly U.S. stock mutual funds. "I've been investing in the market for long enough to know that sooner or later after it comes up, it's going to go down, but when that may or may not happen none of us know," he said.

His adviser, David Kudla, founder, chief executive and chief investment strategist of Mainstay Capital Management LLC, of Grand Blanc, Mich., has been bullish on U.S. stocks since the election because he expects less regulation, plus tax cuts and infrastructure spending.

Still, said Mr. Kudla, whose firm oversees more than \$2 billion in assets, investors should be prepared for a correction. "What we've seen in the last eight years is not going to continue," he said. "Remember diversification."

-Akane Otani contributed to this article.

### Deal-Starved Lenders Look Banker at Toward Chinese Tech IPOs

By ALEC MACFARLANE

Global banks coming off a slow year for initial public offerings are looking to China

Chinese technology startups with total valuations estimated in the hundreds of billions of dollars are expected to tap public markets for funds in the next few years. They range from well-known behemoths such as Ant Financial Services Group, the payments and banking affiliate of e-commerce giant Alibaba Group **Holding** Ltd.. to the likes of news aggregator Toutiao.

If many elect to list outside the mainland, say in New York or Hong Kong—the pattern in recent vears—it could mean a big payday for global banks. U.S. markets have already

Asian companies, particularly Chinese, are an important source of IPO

**Asian Wave** 

**Global IPO fees** 

\$8 billion

2010

'11

fees for global bankers

bined value at \$200 billion.

One Wall Street bank that is boosting tech staff in Hong Kong privately estimates the combined valuation of Chinese tech companies that could come to market in the next few vears at around \$400 billion. Assuming their valuations rise by one-quarter before they list and they offer around 15% of their shares to the public, the resulting IPOs would total \$75 billion, the bank noted.

Asia—and particularly China—is an increasingly important force in global IPOs. Asian markets last vear accounted for 68% of global listings and 56% of the money raised. Companies from China have fed other markets, with 60 from the mainland going public outside the country last year, according to Dealogic.

mainland, but the companies could decide to go public at home-where valuations are typically higher—in which case their IPOs would likely be handled by local banks and brokers.

Zhong An Online P&C Insurance Co., China's first onlineonly insurance company, had planned a \$2 billion listing this year in Hong Kong, but later decided on mainland China, a person familiar with the matter said. A spokeswoman for Zhong An said the company plans to list but has no detailed schedule vet.

But Chinese exchanges are clogged with a yearslong logjam of listing applications. And tech companies in particular have often chosen to go public in markets such as the Nasdaq, where investors are more familiar with their business models and less picky about profitability.

Tech stocks on U.S. markets, including Chinese companies, have soared recently, lifting expectations for what the IPO candidates could fetch.

The biggest catch would be Ant, whose IPO could raise as much as \$25 billion—about matching Alibaba—although it is unlikely to come this year. according to people familiar with the matter. An Ant spokeswoman said the company doesn't have a schedule or preferred location for the IPO. This year's biggest China

tech listing is likely to be that of Lufax-Shanghai Lujiazui **International Financial Asset Exchange** Co.—whose \$18.5 billion valuation ranks second only to Ant's among private financial-technology companies. Lufax could raise as much as \$5 billion in Hong Kong in the second half of 2017, according to people familiar with the matter.

Executives at Toutiao's parent company have started talking to banks about an IPO in the U.S., although the timing isn't decided, according to people familiar with the matter. The company was valued at roughly \$10 billion following a round of fundraising in December, the people said.

A spokeswoman for Toutiao declined to comment.

### ECB: No New Policy Signal

BRUSSELS—Contrary bullish market reaction, the European Central Bank didn't signal a coming change to its policy mix Thursday, because officials concluded that the outlook for inflation hadn't improved much since December. the governor of Belgium's central bank said in an interview.

The comments from Jan Smets, who sits on the ECB's 25-member governing council as head of the National Bank of Belgium, suggest that the ECB might be further from exiting its massive monetary stimulus than investors had

If so, that would widen the policy divergence between the world's two most important central banks, as the Federal Reserve prepares to raise interest rates as soon as this week. Fed officials have signaled that rates could rise more aggressively this year. That could provide some cover for the ECB if it decided to start exiting its monetary stimulus.

The euro rallied and bond vields jumped last week after ECB chief Mario Draghi highlighted improvements to the eurozone economy and said the central bank was unlikely to roll out fresh stimulus measures to support growth and

The latest policy statement



Jan Smets is head of the National Bank of Belgium

"does not in itself signal a coming change in the monetary-policy stance," Mr. Smets said. "It reflects a simple assessment of a somewhat changed reality, not more than that.'

The improving economic outlook, including a recent jump in inflation, has led some economists and investors to predict the ECB will be in a position later this year to discuss rolling back its stimulus.

Investors had been looking for a change of tone from Frankfurt on Thursday after eurozone inflation rose to 2% last month, slightly above the ECB's target. The bloc's €10 trillion (\$10.7 trillion) economy is currently the fastestgrowing of all major developed economies, according to IHS Markit.

In Germany, Europe's largest economy, top officials and economists are calling loudly for a swift exit from the central bank's €2.3 trillion bondpurchase program, known as quantitative easing. The program is currently due to last at least through December.

In the event, the ECB slightly upgraded its economic forecasts, but left in place its key policy measures, including its QE program and subzero interest rates. It also kept

open the option of boosting its stimulus again if necessary.

But at a news conference, Mr. Draghi sounded bullish, telling reporters "there is no longer that sense of urgency in taking further actions" to fight ultralow inflation. Analysts concluded that the ECB chief was signaling possible changes in the months ahead.

Mr. Smets warned, however, that on the crucial indicatorinflation—policy hadn't seen much improvement, beyond a short-term boost from higher energy

"I would not say that the assessment vesterday was very different from the one we made in December," he said. "OK, there was a marginal increase of underlying inflation figures and headline inflation went up, but we have to look through this energy component, we have to look at the medium-term outlook."

Within the ECB, top officials appear split over how quickly to start discussing an exit. Some, notably German Bundesbank President Jens Weidmann, have said the current dosage of stimulus is too strong for a recovering economy, while others think easy money is vital and should be kept in place.

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### IPO of **Snap** Inc. recently, after a disappointing 2016 in which

15

the number of listings globally fell 12% and the amount of capital raised fell 30%, according to data tracker Dealogic. "There is a large and deep pool and pipeline of compa-

12

been heartened by the strong

13

′14

nies from mainland China that we certainly expect to access the markets," said Bob Mc-Cooey, chairman of Asia-Pacific at Nasdaq Inc. That U.S. market is tracking roughly 60 Chinese companies—more than half of them in tech—that it believes could go public in the U.S. over the next two

years. It estimates their com-

THE WALL STREET JOURNAL. Global banks have bene-

'16

China

Rest of the world

Rest of Asia-Pacific

fited, last year collecting \$2.2 billion in IPO fees from Asian companies—55% of the global fee pool, according to Dealogic—including \$1.5 billion from Chinese companies. Of course, it is unclear

when China's IPO-hopefuls will list: For many, private funds are still plentiful. Most private Chinese tech startups "have aspirations to be public companies, but the question is when," said Alain Lam, a senior tech banker at Credit Suisse Group AG in Hong Kong.

Also, where. Western banks have an edge over Chinese in nabbing listings outside the

By Tom Fairless

anticipated.

Speaking to The Wall Street

Journal at his Brussels offices. Mr. Smets denied that the ECB had taken even a small step toward an exit last week.

### MARKETS

# **Bond Yields** Looking Up, **Investors Say**

Higher trajectory likely to persist amid solid growth, rising inflation, despite political risks

By MIKE BIRD

Investors increasingly say that no matter what comes out of Europe's fraught political calendar, the region's bond yields are going higher.

Yields have risen sharply this year as anti-euro political candidates, like France's Marine Le Pen, gain in polls. But even if Ms. Le Pen fails in the spring presidential election, will continue rising, some investors say, given solid economic growth, rising inflation and the expectation that this will rein in the European Central Bank's massive stimulus.

Yields on French, German and Italian government bonds rose again on Friday, ending a week in which the benchmark 10-year bund yield has risen from around 0.348% to 0.45%.

Ultralow bond yields have shaped the eurozone's markets for years, and the effects of a sustained rise could rattle throughout the region. Higher vields would boost the euro as money flows to the currency bloc looking for higher returns, while also driving up debt servicing costs for companies and consumers long used to near-zero and negative interest rates.

The euro rose again Friday, climbing 0.6% to \$1.064.

"Whatever way the elections go, you have risks both said Sarwat Faruqui, head of syndicate in Europe,

the Middle East and Africa at Mitsubishi UFJ Securities International.

A national election in the Netherlands this week and one in Italy potentially later in the year could see anti-euro candidates increase their influence.

But investors have been particularly rattled by Ms. Le Pen, whose anti-euro rhetoric has threatened to revive sovereign-risk fears in European bond markets. During the bloc's sovereign-debt crisis, bond markets were extremely volatile, and yields surged.

But many market watchers now believe that no matter which way these votes go, yields will pick up. Inflation in the eurozone

recently went past the ECB's target of slightly below 2% for the first time in four years while economic growth in the region matched the U.S. last vear. Inflation erodes a bond's

value in the future and pushes central banks to raise rates, which all push up yields. Healthy economic growth tends to push money from income to equities. Yields rise as prices fall.

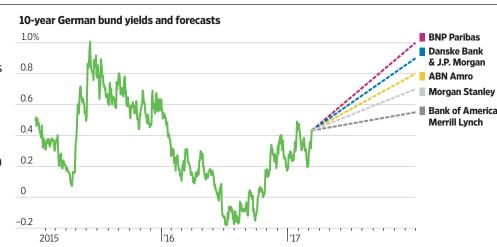
In the eurozone, higher inflation and better growth could eventually encourage the ECB to ease its massive bond buying program or even raise rates.

Investors got a taste of how markets react to that possibility on Thursday, when ECB chief Mario Draghi indicated that fresh economic stimulus measures were unlikely.

Analysts at J.P. Morgan see the European corporate bond market caught between the

#### Onward and **Upward**

Analysts expect bond yields to climb in the eurozone this year, whether driven by increases in inflation and solid economic growth, or by the return of sovereign default risk.



Eurozone harmonized index of consumer prices, year-on-year change



two scenarios of political risk higher inflation and growth, believing yields will pick up in either circumstance. "In either scenario, it feels

like spreads will be wider by June," the bank said in a March 3 research note, "As a result, we cannot justify buy-

from April. Since late 2014 the anticipation of bond buying and then the program itself have reduced yields sharply. In July last year yields hit record lows, with Germany's 10year bund yields falling as low as minus 0.2%

If the central bank begins to raise the prospect of taper-

Eurozone inflation recently went past the ECB's target of slightly below 2%.

ing European credit at current levels, and so continue to advise caution on the asset

The ECB currently buys €80 billion (\$85.4 billion) each month in eurozone government bonds, an amount that will be reduced to €60 billion ing that program yields would likely rise. In May 2013, the Federal Reserve announced that it would soon begin tapering, sending the yields on U.S. 10-year Treasurys from 1.93% to 2.74% by early July.

Citigroup believes that European corporate bond markets aren't yet pricing in enough of either scenario, politics and monetary policy.

"We still meet too many investors convinced that the ECB will somehow come to the rescue, or even that the market would shrug off a Le Pen victory in the same way as it did Brexit," Citi credit analysts said in a recent report, referring to Britain's June vote to leave the European Union. "We could not disagree more strongly.'

To be sure, bonds would react differently depending on whether the selloff is triggered by politics or the ECB.

"In an environment of elevated political risks what we'll see is this idea that not all bonds are equal," said Nick Gartside, chief investment officer for fixed income at J.P. Morgan Asset Management. "There'll be more differentiation between countries in the eye of the storm, and countries like Germany.'

THE WALL STREET JOURNAL

2015

ECB inflation forecasts for 2017

As of March 9

Those countries most exposed to such political risks would be France and weaker economies in southern Europe, particularly Portugal and Greece.

would push up spreads across the board, as a massive buyer of debt stepped back. The euro would also likely

But central bank tapering

gain from such a move, as it follows those bond yields higher.

Since the U.S. presidential election the single currency has fallen by 3.35% against the dollar. That decline has been driven by widening differences in bond yields between Europe and the U.S. If that gap begins to shrink, the euro would likely appreciate in

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FINANCIAL ANALYSIS & COMMENTARY

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## Why Fund Managers Need Mergers

Fund-manager mergers are going to keep on coming. Costs, rather than just chas ing assets, have to be a pri-

Standard Life and Aberdeen Asset Management's deal in the U.K. last week followed the merger announced late last year between U.K.-based Henderson Group and Janus Capital Group of the U.S. and the takeover of Ireland-based Pioneer by French group Amundi

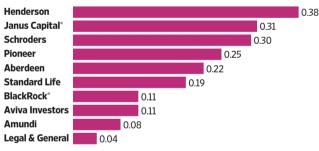
Low market returns and the shift toward passive investment styles are putting pressure on the industry to cut fees, especially among active managers.

But two other big European players, Legal & General, one of Europe's biggest asset managers, and Aviva, a British insurer with a growing funds business, said they weren't interested in doing

To reduce fees and stay profitable managers have to cut costs. Aviva's fund-management chief, Euan Munro, says he doesn't need to do

#### **Penny Pinchers**

Fund managers' ratios of costs to assets under management at end of 2016



\*U.S. numbers, based on expenses after distribution costs aren't strictly comparable to European figures

deals because Aviva Inves-

tors is already pretty effi-

Its ratio of expenses to assets under management was 0.11% in 2016. That isn't bad, but Legal & General and Amundi are much cheaper to run at 0.04% and 0.08% respectively based on assets at the end of 2016.

Comparisons with U.S. managers aren't easy because they account for distribution costs differently.

THE WALL STREET JOURNAL. Taking distribution costs out

of BlackRock's expenses would put the world's biggest asset manager on a ratio of 0.11%, although that is probably still higher than it would be under European accounting. Standard Life and Aber-

deen should be able to cut costs in their merger because of overlaps in their Scotland headquarters. A ratio of 0.19% for Standard Life and 0.22% for Aberdeen

should fall to about 0.17% based on 2016 numbers and including synergies—assum ing they stop losing assets after the deal.

These two could probably save more, but being an active manager is more expensive: The stock-pickers get higher pay, the companies spend more on research and they incur more trading costs.

Henderson, for example, has a cost-to-assets ratio of 0.38%, worse than larger U.K. rival Schroders at 0.30%. Henderson should bring this down with its deal for Janus. which has more assets and lower costs even before any merger-related savings.

Active managers generate higher fees, so they prefer to look at costs in relation to revenue: On that basis Henderson is already more efficient than Aviva Investors. but still a way behind Legal & General. Mergers between fund man-

agers are aimed at winning more assets as well, but in this environment expenses really -Paul J. Davies

### **OVERHEARD**

We're No. 1! We're No. 1! New York's LaGuardia Airport, infamously derided as Third World by former Vice President Joe Biden and dissed by President Donald Trump, among others, finally has some good news.

The travel site eDreams compiled a list of the best and worst airports in the world from 65,000 reviews. Coming in first, or in other words the worst, was Berlin's

Schönefeld Airport. While it may not have been described as Third World, the airport is literally Second World, having been the main international airport of the former East Germany and the hub of its state airline, Interflug

But No. 3 LaGuardia shouldn't succumb to schadenfreude about its unfortunate German competitor and No. 2 worst, London's discount hub Luton. LaGuardia is in the richest city in the world's biggest economy and is served by major, fullservice airlines, not just budaet ones.

### Microsoft Keeps Eye On Spending

In the expensive arms race of cloud computing, getting the most bang for your buck is kev-particularly when a lot of bucks are involved.

Take **Microsoft**: Hardly a pauper with nearly \$47 billion net cash in the bank, the software giant is nevertheless spending enormous sums to transform its traditional software business into a cloudbased one. About \$8.3 billion went out the door in capital expenditures for the most recent fiscal year ended in June, and that was a 40% jump from the prior year.

Maintaining that pace would strain the deepest of pockets, so it is no surprise that "efficiency" is the latest watchword. Chief Financial Officer Amy Hood has promised that capital spending this year won't match last year's surge.

Wall Street is projecting capex growth of about 8% to \$9 billion for the current fiscal year. Delivering that efficiency explains why Microsoft is moving to customize the equipment on which its data centers run. In a blog post about its cloud strategy this past week, the company says it is now "more economically feasible to optimize the hardware to the workload instead of the other way around." That apparently means buy ing fewer servers from Hewlett Packard Enterprise, as that company's most recent quarterly report suggests. Microsoft also could end up buying fewer server chips from Intel, given Microsoft's most recent progress in developing custom ARM-based processors for data centers.

Whether that effort ultimately yields cheaper chips, or price concessions from an Intel intent on protecting its turf, remains to be seen. Microsoft wins either way.

-Dan Gallagher

### In Wave of Hotel Deals, Winners May Be on the Sidelines

The world's largest hotel companies are besieged. On one side are their mortal frenemies, online travel agents, who shovel them business but take too juicy a slice in return. Then there is Airbnb, adding supply in the best locations and stealing would-be hotel customers.

How to deal with these threats is no simple business. Scale is one response The Marriott-Starwood merger created by far the world's largest hotel group. European giant AccorHotels appears to be following suit with deals to bulk up. But for investors, a better bet may be to stick with those less focused on deals, such as In-

#### terContinental Hotels.

In relation to hotels, online travel agents have amassed enviable scale. **Expedia**, Priceline and Ctrip dominate

the landscape in a way that old-fashioned agents never did. Each has a different geographic stronghold: Expedia in the U.S., Priceline through Booking.com in Europe and Ctrip in China. Airbnb is also an online travel agent of sorts.

The hotel business is far more fragmented. Marriott's Starwood purchase still leaves it with only 7% of rooms globally, according to data provider STR—and that excludes establishments with fewer than 10 rooms. This imbalance gives negotiating

power to the agents, whose commissions range from 12% to 22% of the room price, according to Citigroup.

Reducing commissions is supposed to be a key benefit of the Marriott-Starwood deal. AccorHotels, too, has tried to build scale through hotel acquisitions: Last summer, it paid roughly \$3 billion for a luxury operator that owned the Fairmont, Raffles and Swissôtel brands. But it has also ventured onto the agents' turf, opening its own booking portal to partner hotel groups and buying onefinestay, an upscale version of Airbnb. The risk of this approach is that the expensive

puzzle pieces don't end up

#### **Room for Mergers** Top five hotel operators by

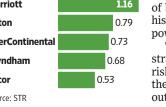
In millions



fitting into the glamorous picture sketched in investor presentations.

is more conventional: It builds scale by opening hotels, while keeping commis-

## number of rooms in January



InterContinental's strategy

sions under control by developing its loyalty program. It has also removed more substandard hotels from its portfolio than peers: Chief Executive Richard Solomons talks of brand, rather than scale, as his key bulwark against the power of online distributors.

This is probably the safer strategy for investors. The risk for Mr. Solomons is that the company is itself bought out; reports surfaced last summer involving Anbang, the Chinese company that failed to outbid Marriott for Starwood. As the hotel indus try consolidates, InterContinental seems the nicer place to stay

-Stephen Wilmot